VOLUME XV NUMBER 7

THE ELEMENTARY SCHOOL JOURNAL

CONTINUING "THE ELEMENTARY SCHOOL TEACHER"

MARCH 1915

EDUCATIONAL NEWS AND EDITORIAL COMMENT

A School Bulletin

The superintendent and the Board of Education of the schools of Kansas City, Missouri, issued early in January the first number of the *Kansas City School Bulletin*. The character and purpose of this publication are described in the leading editorial article, which we quote because it contains such a clear statement of a very legitimate social purpose that ought to be served by some kind of school publication. If other school systems would recognize with equal clearness the importance of keeping in close contact with the citizens of the community, many misunderstandings which come from school work could be avoided.

To the Citizens of Kansas City:

Annually the Board of Directors of the public schools publishes a report of several hundred pages giving in detail an account of all phases of public-school work. This report contains two classes of matter: (1) Statistical tables showing school expenditures and school attendance in detail. (2) Reports from the superintendent of schools and other officers of the Board of Directors setting forth the plans and policies of the Board and its officers.

The Board of Directors has long desired that the people should know more fully about the work of the schools. The voluminous character of the annual report and the cost of its publication render it unwise and extravagant to print these reports in sufficient quantity that one may be sent to every home in the city, and furthermore many of the statistical tables in such reports are necessarily dry, tedious, and uninteresting to the casual reader. Although each

home is deeply interested in the policies and in the success of the public schools, many parents have not time for a thorough study of these complete reports, however valuable and necessary under the law they may be. In view of these facts, the Board of Directors in October of this year authorized the superintendent of schools to publish from time to time the *Kansas City School Bulletin*. It will be the purpose of this *School Bulletin* to give the parents and taxpayers of Kansas City brief summaries of the statistical tables of the *Annual Report* and of the articles of this report, and to publish from time to time such other plans and policies as may be adopted, and to keep the people more fully informed in regard to the work of the schools. The motto of this *Bulletin* is "For Increased Co-operation between Home and School." We believe that the home and school are striving for the same ends and that in fact the school is merely the agent of the home to perform certain work for the children that the home finds it impossible to do. Hence it is very fitting that your agents should report to you frequently. It will be the plan to publish enough copies of the *School Bulletin* to reach the home of every child in the schools. The Board of Directors, superintendent, and teachers desire the most hearty co-operation with the home. The superintendent especially in the opening number of the *Bulletin* desires to express personally his sincere appreciation of the hearty response that has come from the homes of Kansas City to all efforts at securing more efficient service and better school conditions. As will be told in the *Bulletin* from time to time, Kansas City has made wonderful progress in her schools in the past quarter of a century. There yet remains much to be done. The noblest motive that actuates any parent or teacher is the desire to make life happier, better, and more helpful for the next generation than it has been for the present one. Such a motive eliminates self and lifts its possessor to a high plane of joyful service. You shall be told frankly of the achievements of our schools and of their possibilities. Their weaknesses and difficulties will be pointed out in order that you may help strengthen the weak places and remove the difficulties, thereby assisting in the betterment of the service rendered.

Educational Activity of the Department of Agriculture

The Department of Agriculture of the federal government has of late taken up a series of vigorous activities in connection with elementary schools. It will be remembered that Congress passed a law authorizing a much more general participation by this department and the related institutions in the general development of agricultural and technical education throughout the United States. It will not be possible to quote in full detail the bulletin which has just been issued, but the following extracts will serve to indicate the character and scope of the work which the Department of

Agriculture is now ready to undertake in connection with elementary-school work:

Mothers and teachers who wish to keep the young people cheerfully busy in useful tasks about the home or farm may be interested in a project of the United States Department of Agriculture for organizing farm and home handicraft clubs. Some of the arts and crafts in which the department's specialist in charge of club work for the northern and western states hopes to interest his boys and girls are as follows:

1. Rope-tying and -splicing.
2. Making seed testers (box, blotter, and rag-doll testers).
3. Making a hen coop and brooder.
4. Fruit-tree grafting and tree surgery.

. . . . . .

11. Sharpening saw, pair of scissors.
12. Making a medicine cabinet.
13. Making and laying a cement walk or floor.

. . . . . .

16. Drawing plan of 80-acre farmstead.
17. Forging—2 kinds, practical, related to farm work.
18. Welding—2 kinds, practical, related to farm work.
19. Horseshoe-making.
20. First aid to household furniture: (*a*) chair; (*b*) table; (*c*) picture frame; (*d*) door lock or hinge.
21. Pressing and cleaning a suit of clothes.
22. Papering a room.

. . . . . .

30. Show how to repair the cover or broken back of a book.
31. Art metal work for household.
32. Modeling in clay and plaster.
33. Leather work: repair of leather goods or art work.
34. Fabric-dyeing and -printing.
35. Pottery for use in the home.
36. Basketry for use in gathering and marketing vegetables and fruit.

. . . . . .

These are mere suggestions which have been sent out to different state and district leaders in the northern and western states. It is hoped this list will enable them to encourage lines of work that have an economic value in the farm and home management of any community.

The new clubs, it is expected, will be merely the agricultural clubs already organized among the young people and the new lines of industrial work will be taken up at times and seasons when corn, pigs, chickens, and vegetables do not need the special attention of the boys and girls. Under the new plan

each club member will probably select about ten of the suggested tasks and do each of them during convenient moments. The results of the work of all the members of one club will be exhibited at the end of a year's time in a place where the rest of the community may see what has been attempted and may pass judgment on its value.

Any mother or teacher who would care to interest her children in any of the arts and crafts outlined above may write for further details to the Office in Charge of Club Work for the Northern and Western States, United States Department of Agriculture, Washington, D.C.

New Orleans Researches

A series of publications issued by the Division of Educational Research connected with the public schools of the city of New Orleans furnishes another example of the value of scientific work in connection with the office of a superintendent of a great city school system. Mr. D. S. Hill, who is the officer in charge of this division, issues in a pamphlet entitled *Measurements in Elementary Education* a study of the progress of children in the city of New Orleans. The relative age in the various grades, the rate of their progress, and other general information about the character of each one of the classes are presented in such form that each school can see its individual record and can make a comparison of this record with the general average of the city. The second division of the pamphlet deals with the educational laboratory, describing briefly its equipment and its purposes. The third part of the pamphlet deals with certain problems of industrial education.

Mr. Hill has also prepared at the request of the commissioner of public property a study of delinquent and destitute boys in New Orleans. This pamphlet gives in full detail the mental and moral characteristics of a number of boys who constitute a genuine sort of problem.

A third pamphlet issued by this division deals with the vocational survey for the Central Trades School and is entitled *Facts about Public Schools of New Orleans in Relation to Vocation.*

The Division of Educational Research in the city of New Orleans is one of six or seven such organizations in the leading cities of the United States. It is very gratifying to the student of education to see this movement spreading in all parts of the country. There can be very little doubt that the superintendent's

office in every large city in the United States will shortly be equipped with facilities for the kind of investigation which is being pushed forward so successfully in New Orleans.

An Exhibit on Asphalt

We are glad to give currency to the following notice sent out by the Barber Asphalt Paving Company, Land Title Building, Philadelphia:

So many requests for literature, samples, and exhibits describing asphalt, its sources and uses, have reached us from primary schools, high schools, and colleges that it has been found desirable to prepare a school exhibit together with illustrated booklets especially for the use of schools. These appear to be used in teaching commercial geography. Apparently one teacher or school learns from another that this matter is available, and in this way the requests come to us, since we have never made an announcement previous to this that the exhibits and booklets were available.

Any requests for this material that may reach us from your readers will be gladly complied with. The exhibit and the literature are sent entirely without charge.

Sizes of Boards of Education in Different Cities

In the course of the discussion in New York City regarding the reduction of the large board of education to a small and more representative group, the Public Education Association of the city of New York has just issued a bulletin regarding the sizes of boards of education in cities of 100,000 population and over which reveals the following facts:

Twenty-three of these cities have boards of education of more than seven members, and only thirteen have boards of more than nine members. The common size is five. The tendency is distinctly toward the small board. In seven cases only has the board been enlarged, and in each of these cases the addition was small. In two cities, Chicago and Detroit, the addition occurred in the nineties, before the desirability of small boards was clearly recognized. In some cases, as in Boston, Baltimore, Cambridge, Cincinnati, Grand Rapids, Newark, New Orleans, Pittsburgh, Scranton, Syracuse, and Toledo, the decrease has been remarkable. The size of the board does not increase with the size of the city; the tendency seems to be for large cities to have smaller boards than the smaller cities of the group of 100,000 population and over.

The following table shows the sizes of school boards in cities of this class:

Size of Board	Number of Cities	Names of Cities
0	2	Buffalo,* St. Paul†
3	1	Albany
4	1	San Francisco
5	14	Spokane, Cambridge, Lowell, Memphis, Birmingham, Toledo, Portland, Denver, Rochester, Louisville, Indianapolis, Seattle, New Orleans, Boston
6	1	Kansas City
7	8	New Haven, Syracuse, Oakland, Columbus, Minneapolis, Los Angeles, Cincinnati, Cleveland
9	10	Nashville, Grand Rapids, Fall River, Paterson, Richmond, Scranton, Jersey City, Washington, Newark, Baltimore
12	4	Bridgeport, Omaha, Atlanta, St. Louis
14	1	Dayton
15	3	Milwaukee, Pittsburgh, Philadelphia
18	1	Detroit
21	1	Chicago
30	1	Worcester
33	1	Providence
46	1	New York

* In Buffalo, the commission charter recently adopted provides for a board of education consisting of five members.

†The schools of St. Paul are administered by one of the board of commissioners who appoints a superintendent of schools.

The following kindergarten letter issued by the Bureau of Education will be of interest to all who are concerned with the extension of the kindergarten movement:

Kindergarten News

The kindergarten is coming to its own in the state of California largely through the law recently passed by that state. The law provides that "upon petition of parents or guardians of 25 or more children between the ages of four and a half and six, residing within a mile of any elementary school," and with the approval of the school authorities, the board of education of the school concerned "shall establish and maintain a kindergarten." This law has already resulted in the presentation of 50 petitions with 36 kindergartens opened so far in 21 different cities, 19 of which never had a kindergarten. The legislation that accomplished this was the result of the efforts of the California State Congress of Mothers.

It is fitting that California should take high rank among the states in regard to kindergarten work. It was the Silver Street Kindergarten in San Francisco, conducted as far back as 1878 by Mrs. Kate Douglas Wiggin and her sister, that helped to give such popularity and celebrity to the kindergarten cause throughout the United States. The Silver Street School inspired the Golden Gate Kindergarten Association, identified in the public mind with its founder,

Mrs. Sarah B. Cooper. Mrs. Cooper's work, in turn, brought forth the first kindergarten legacy—that of Mrs. Leland Stanford. The first public lecturer to espouse the kindergarten cause was Felix Adler, who stirred Los Angeles and San Francisco in 1875–76, when visiting the Pacific Coast on a lecture tour. It is expected that California, now in the eleventh place among the states in kindergarten work, will, under the inspiration of the new law, move up to near the front, particularly because of the Panama-Pacific Exposition.

The exposition of Philadelphia in 1876 not only acquainted that city with kindergarten work, with the result that Miss Burritt, the "Centennial kindergartner," was retained there, but the exposition opened the eyes of the entire country to the principles and methods of the kindergarten. In like manner California at the Panama-Pacific Exposition will doubtless present a complete free educational system, including the kindergarten.

Illiteracy among Adults

Between 4,000,000 and 5,000,000 adults in the United States can neither read nor write, according to figures recently prepared from the census of 1910 by the United States Bureau of Education for the Panama-Pacific Exposition. There has been a notable decrease in illiteracy among children from ten to fourteen years of age, the numbers decreasing from 42 in each 1,000 in 1900 to 22 in each 1,000 in 1910. Most of the illiteracy among children is in the southern states.

The foregoing facts, together with the recent discussions in Congress in connection with the immigration bill, again raise the question of what the schools should do to decrease illiteracy in the country. For children between ten and fourteen years of age the problem is relatively simple. Adequate compulsory attendance laws, rigorously enforced, will place such children in the regular schools. For illiterate persons above the compulsory-attendance age the problem is more difficult. Such persons are usually at work and find in the evening classes conducted in school buildings the only provisions generally made by the schools for instructing them in reading and writing. Such evening classes are in general voluntary and are attended only by the stronger and more ambitious among the illiterates.

In New York City an interesting experiment has been conducted the past two years in offering a part-time continuation course to non-English-speaking women at work in a clothing factory. The class meets in the factory. The employer furnishes the room and

equipment and allows the employees to attend the class during working hours without loss of pay. The Board of Education furnishes the teacher and the supplies. In this case, both employer and employees are convinced that the factory efficiency of the employees is increased as a result of the class work, although the instruction is not vocational in the sense that it gives training in the factory processes. Instruction is given in English; simple hygiene related to the individual, the home, and the factory; accident prevention; and concrete civics comprising the relation of the employee to the employer, to the family, and to the community.

Similar continuation classes are conducted by the school authorities of New York City in hotels and settlements. The classes which meet in hotels are held in the evening and are attended by the hotel maids who cannot speak English. The classes which meet in settlements are day classes and are attended by night workers in the neighborhood who cannot speak English.

By thus securing the co-operation of employers the New York school authorities are carrying the instruction to the illiterate workers at their place of work. Such a plan seems necessary if any large reduction is to be made in the number of illiterates in the country who are beyond the compulsory-attendance age. At least one employer thinks it pays to give time for such instruction during working hours without loss of pay.

Religious Education

In spite of the war an international convention will be held in Buffalo in the first week of March. This is the convention of the Religious Education Association, discussing the topic, "The Rights of the Child," bringing one hundred speakers of national fame for its thirty different meetings on the days March 4–7. The association which holds this convention has members in all parts of the world and represents all the different faiths and churches.

Among the attractions of the convention will be an exhibit on child welfare in relation to education. Materials, pictures, charts, diagrams, gathered from all parts of the country, will be shown, illustrating present conditions and the best methods of providing for the proper development of children, especially as to their moral and religious lives.

Educational Progress in Virginia

The progress of education in the state of Virginia during the last decade is a source of considerable pride to the citizens of that state who are interested in education. In view of the fact that the population of Virginia has increased but comparatively little since 1905, the following facts indicate a substantial educational advance. They also probably give a rough measure of progress in the more progressive sections of the country.

Increase in enrolment	78,345
Increase in average daily attendance	82,345
Increase of state, county, and city appropriations	$4,025,386.77
Increase of high schools	427
Increase in salaries of teachers	$2,080,530.62
Number of new schoolhouses	2,412
Cost of new schoolhouses and grounds	$6,113,189.45
Number of schoolhouses consolidated	572
New normal training schools built	3

Of more significance than the quantitative progress represented by the facts just given is the qualitative progress indicated by the following list of new features introduced in the schools of Virginia during the past ten years: "School Fairs, School Leagues, Civic Leagues, Night Schools, Open-Air Schools, School Wagons, Industrial Supervisors, Manual Training, Domestic Science, Girls' Canning Clubs, Boys' Corn Clubs, Mothers' Clubs, Extension Work, Medical Inspection, Free Lunches, Industrial Surveys, Vocation Schools, School Inspectors, Schools for Adult Illiterates, Supervised School Athletics, Public Playgrounds, Literary Leagues, Debating Societies, Teachers' Reading Courses, School Gardens, Normal Training Schools, Agricultural Schools, and Classes for Backward Pupils."

The interesting fact clearly brought out by this list of innovations is that the conception of education has been rapidly changing during the twentieth century. A generation ago it would have been difficult to see the relation between public education and industrial surveys, girls' canning clubs, etc. The value of the school is coming to be measured by the extent to which it serves the community. The school is not an end in itself.

Comparison of Races

The *Honolulu Friend* reports a comparative study recently made on the grades of graduates of the three largest Honolulu high schools and grammar schools for five years to determine the relative standing by races. There were 804 graduates, of whom 251 were of American or North European parentage, 191 Chinese, 113 Japanese, 112 mixed white and Hawaiians, 77 Portuguese, 28 Hawaiians, 22 Chinese-Hawaiians, and 10 Koreans.

Of the 113 Japanese graduates, 30.1 per cent ranked A, or 90 on a scale of 100; of the 10 Koreans, 30 per cent; of the Chinese, 26.7; of the Chinese-Hawaiians, 18.2; of the white Hawaiians, 16; of the American and North European, 13.2; of the Portuguese, 11.7; and of the pure Hawaiians, 10.7 per cent.

The results of this test may cause the "superior" white race to ponder on the preparation their children are making to carry the white man's burden.

Industrial Monographs

A joint committee made of manufacturers is publishing a series of monographs which contain full information with regard to different phases of mechanics and physical science. *Monograph No. 5* is published by the Singer Sewing Machine Company and contains a full description of the mechanics of sewing machines. *Monograph No. 2* is published by the Weston Electrical Instrument Company of Newark, New Jersey, and gives an account of elementary electrical testing. *Monograph No. 3* is an account of the Edison storage battery. *Monograph No. 4* is an account of experimental electrical testing. These monographs dispense a great deal of useful information. Their purpose is described in a note in the preface as follows: "These monographs are intended to convey to teachers the point of view of men of affairs and the principles and facts worth teaching to students in each specialty."

The information will be very valuable to anyone who is interested in mechanics and in giving instruction to children in any grade of school. Some of the material is directly useful for seventh- or eighth-grade pupils. The rest of the information is of such a nature that it would be directly available for students in the early years of the high-school course.

Governor Brumbaugh's Report

Dr. Martin G. Brumbaugh, in the last report he made to the Philadelphia school board before assuming the duties of the governorship, recommends that the school system of the city be organized on the six-six basis with junior and senior high schools of three years each.

He also criticizes the schools of observation and practice used in the preparation of prospective teachers as made up of selected pupils and not affording real school conditions. While appreciating the pedagogic value of such schools, Dr. Brumbaugh thinks it would be much better practice for student-teachers to carry on their work under actual teaching conditions, and concludes by saying, "I hope the board will not increase or even continue the artificial and expensive machinery now used to train our young men and women to teach."

EDUCATIONAL WRITINGS

Two books[1] have recently appeared on school discipline. One is by Professor Bagley and the other by Miss Morehouse, supervisor of high-school teaching in the Illinois State Normal University.

The appearance of these two books shows that the problems of school administration are to be taken up in the future in more detail than has been possible in the general treatises on education which have been the accepted means of training teachers up to this time. A chapter on school discipline has been common in all of the books prepared for teachers and supervisors, but the appearance of whole volumes devoted to this subject suggests the possibility of subdividing the field of education so that there shall be special books on such topics as the promotion of children in the grades, the preparation of a lesson by the teacher, the organization of the study period in schools, and so on. The development of a body of material on each of these topics is sure to follow as soon as it becomes apparent that classifications of the type which appear in these volumes are helpful to the teacher in training and to the experienced teacher who wishes to formulate his experience in definite, scientific terms.

The two books in hand may be characterized by saying that Miss Morehouse's book is somewhat more general in its discussions than is Professor Bagley's. Miss Morehouse discusses the methods of school government in general. She then deals with the various types of disciplinary activity, with the different types of offenses, and with the punishments with which teachers attempt to check these offenses. Several chapters on disciplinary devices then follow which give help to the teacher in determining the methods of dealing with cases.

Professor Bagley's book, on the other hand, begins with a very concrete description of the unruly school. He aims to point out

[1] *School Discipline.* By William Chandler Bagley. Macmillan, 1914. Pp. 250.
The Discipline of the School. By Frances M. Morehouse. D. C. Heath & Co., 1914. Pp. 342.

the causes of unruliness in the school and then deals with the methods of treating this difficulty and describes in detail the various forms of punishment and reward. The final chapters deal with the characteristics of the orderly school and the types of pupils with which the teacher has to deal.

Both books make an effort to classify the cases. Professor Bagley gives in one chapter a very interesting account of the troublesome types of pupils. Here he classifies different pupils as stubborn, haughty, self-complacent, irresponsible, morose, hypersensitive, deceitful, and vicious. Each of these types is described in some detail and suggestions are given with regard to the methods of dealing with them. Any teacher who has had classroom experience realizes the importance of knowing human nature in its various manifestations far enough to realize that individual treatment of different pupils is necessary if their own advantage is to be gained and the discipline of the classroom maintained.

The service which these two authors have rendered in pointing out the detailed character of the problem of discipline is very great. The books are addressed to young and inexperienced teachers, it being assumed that they will find the problems of discipline most difficult to understand and deal with. Both books reiterate the general principle that there is no possibility of doing good intellectual work in a classroom until the conditions are favorable for attention to intellectual problems without serious distractions because of lack of order. Both books attempt to make the problems of the schoolroom subordinate to the general problem of instruction, and yet both books recognize the fact that it is quite impossible to deal with many of the cases that arise in school discipline merely through instructorial methods.

The first report of the General Education Board[1] is a descriptive summary of the work which has been done by this organization during the last twelve years. The report is a bound volume of 240 pages with many maps and illustrations showing the scope and character of the work that has been undertaken.

[1] *The General Education Board 1902–1914.* Published by the Board, 1915.

In the South the Board has been very active in developing first of all a large number of community activities which lie outside of the province of the ordinary school work. Experimental farming has been undertaken in a sufficient number of centers to furnish concrete examples to all of the communities in the southern states of the best methods of agriculture and of the disposition of products of agriculture. The boys and girls of the South have been encouraged to cultivate more intelligently the crops which are appropriate to their soil and they have been shown how the products can be canned and prepared for market.

As one reads the report of this work, he sees the grounds for the enthusiasm exhibited by the writers of the report. On the other hand, there is some danger of overemphasis of these types of work and their educational importance. The general educational theory which grows out of constant contact with these productive industrial experiments is likely to be an educational theory which depreciates the ordinary school subjects. Something of this temper is exhibited at various points in the report.

The second general type of activity in which the Board has been interested is the development of higher education, of secondary schools in the South and colleges and universities throughout the United States. Especially through the appointment of agents for the inspection and development of secondary schools in the southern states has the Board contributed to a rapid enlargement of the high-school opportunities that are offered to southern children. It has undoubtedly helped to raise the standards very much more rapidly than the communities could have done the work if left to their own unaided resources.

The giving to colleges has also been carried on with a view to raising standards, especially standards of financial administration. There is no group of institutions in the world with less feeling of public responsibility for funds than American colleges. The Board has taught many of these institutions how to keep their accounts and how to make reports that approximate the truth.

One sometimes wonders why the Board, which has been so insistent upon careful and complete accounting on the part of the institutions with which it deals, has never seen the importance of

issuing a similar report of its own doings. The enormous body of funds handled by the General Education Board makes it a public institution in every sense of the word. It undoubtedly has a complete and accurate account of everything that it has done, but the public is admitted to its counsels only through a general summary of the funds which it has disbursed.

Finally, the General Education Board has done much to improve in recent years the status of medical education in this country. It has given liberally to a few centers with a definite understanding that at these centers medical education should be improved as rapidly as possible. The importance of this sort of benefaction cannot be overestimated.

The book concludes with chapters on negro education and some description of the experiments in rural education which are being projected outside of the southern states.

The preface contains a promise that other reports will from time to time follow upon this first statement of the Board's activities and plans. It is undoubtedly true, as the book states, that an earlier report would have been somewhat premature because the Board itself was feeling its way and attempting to find a proper sphere for its operations. A feeling of responsibility to the public manifested in a constant exhibition to the public of the activities and theories of the Board would be a very wholesome acknowledgment of the public interest in so large and influential an enterprise. It is to be hoped that later reports will deal in much greater detail with the work that is undertaken and will give also, in definite, quantitative form, some statement of the results which have been obtained.

The present report contains a large body of descriptive material. It differs from the conventional reports of institutions of this sort in the fact that it is a document which the ordinary laymen will read with great interest. But it lacks some of the precision and completeness which is to be expected in reports issued by great public agencies.

The body of periodical literature in education is so large that additions in the way of new journals are likely to escape attention.

Within the past few months two very notable additions have been made to the list of educational periodicals.

Professor Cattell, well known as the editor of a number of scientific journals, including the *Popular Science Monthly* and *Science*, has begun the publication of a weekly journal entitled *School and Society*. This new journal is uniform in its appearance with *Science*, and in its internal organization reminds one of that journal.

It has already reported in its first four numbers addresses by President Eliot, G. Stanley Hall, Commissioner Claxton, and others at various educational gatherings. It has given a large body of educational news from many different educational institutions. The discussions also indicate that there are many problems which are of importance to teachers of all grades. In general, it may be said that the appearance of this journal promises to give an avenue for immediate publication of important educational material from all parts of the country.

The suggestion has been made from time to time that the National Education Association devote its energies to a general publication which should appeal to all who are engaged in the schools and universities of this country. The National Education Association has for some reason or other not seen the importance of undertaking this work. It has remained for private enterprise and for institutions to organize all of the dignified educational journalism of the country.

One cannot help feeling some regret that *School and Society* is not the expression of organized interest in educational journalism. It would have been very much more appropriate for some great national institution such as the National Society to issue a weekly of this type. Since no public institution has undertaken the task, it is of the highest credit to Professor Cattell that he has seen the opportunity and acted on it.

Another new journal, entitled *Educational Administration and Supervision*, edited by Professors Coffman and Johnston, Commissioner Snedden, and Superintendent Van Sickle, is to appear monthly except in July and August. The first issue contains eighty pages and is to be devoted to the discussion of problems of

importance to superintendents and supervisors. A statement of the purposes of this journal is given in an editorial comment as follows:

> *Educational Administration and Supervision* will be a monthly journal covering fields which can roughly be distinguished as follows: (1) state and county systems of education, including rural education and also educational legislation; (2) city school systems, including chiefly problems of city administration, supervision, management, reporting, and educational statistics; (3) secondary education, including problems of organization, administration, inspection, curriculum-making, and internal supervision, management, and the pedagogy of the different subjects, and including also a consideration of those problems of higher education involving directly the interests of secondary education; and (4) elementary education, with the problems in this field analogous to those cited for secondary education.
>
> In addition to these fairly distinct administrative fields there are those overlapping problems of vocational education and of school extension, the one including agricultural education, and all varieties of trade, of continuation, part-time, and evening schools; and the other including broadly the problems of school hygiene, of the school as a social center, and of the school's co-operative agencies.

The first issue shows the scope of the journal's interests by giving, first of all, a brief discussion by Professor Cubberley of the fundamental problems of school administration. The contrast between the interests of the community and of the larger unit of organization is pointed out by Professor Cubberley in the type of treatment which has become familiar to his readers.

The second article, by Professor Coffman, gives an account of the characteristics and the influence of the American school superintendent. This paper leaves a vivid impression in one's mind that the school superintendent is a factor of large importance in American education. He is a relatively permanent factor in school organization as contrasted with the teachers, who are much more transient in their connections with schools. He is at the center of the organization in a very influential degree.

The third article, on "The High School Issue," by Professor Johnston, is cast in the somewhat elaborate literary form of a dialogue between those who have interested themselves in the organization of secondary schools.

A short article by Professor Davis, of the University of Michigan, on "College Surveillance and Student Responsibility," exhibits the practices of a number of leading institutions with regard to reports and methods of dealing with college students.

Briefer discussions are to have a place in the new journal. Book reviews and editorial comments range in their topics from city charters of schools to discussions of the position of a superintendent as an educational expert and discussions of vocational tendencies in education.

The appearance of another journal which is to have high-grade, scientific discussions of school matters is an encouraging evidence of the development of a scientific attitude within the educational profession.

A little pamphlet[1] which gives definite suggestions regarding the measurement of various school activities will be useful to many teachers who are anxious to try out some of the methods of measurement.

The tests which have been performed by Mr. Courtis have come to be so widely known that it is unnecessary to comment on the possibility at the present time of securing test material from that source. The current articles in most of the educational journals make suggestions as to other methods of testing. The scales of handwriting prepared by Professor Thorndike, Mr. Ayres, and Professor Freeman, all make it clear that teachers are utilizing standardized tests much more frequently than they did a few years ago.

Professor Starch's contribution to this sort of work lies in the fact that he has brought together tests in reading, English, and spelling, these being perhaps the most difficult phases of school work to test, and undoubtedly the most important phases from the point of view of the elementary school. A great deal of work has been done in spelling and that is perhaps the line of work which can be most easily measured of any in the elementary school. Reading and English are very baffling because of the complexity of the problems which they present.

[1] *The Measurement of Efficiency in Reading, Writing, Spelling and English.* By Daniel Starch. The College Book Store, Madison, Wis., 1914. Pp. 33.

This *Journal* has made an effort during the last year to bring together as much material as possible on reading tests, and Professor Starch's work will be a welcome addition to the material which has thus been presented.

Mr. Davis[1] has been engaged for some years past in one of the most extended school experiments in vocational guidance that is to be found anywhere in the United States. He is an enthusiastic advocate of this type of work and believes that it will modify the whole of the school course and that the community can very properly devote a large amount of time and energy to informing its young people about industrial opportunity and placing them in lines of work which will be suited to their individual needs and training.

The book is written by himself and some of his colleagues. It contains an account of the work which has been going on at Grand Rapids. It is written very largely from the point of view of the secondary school, where most of this effective work has been carried out; but there are chapters in the book that will be very suggestive to elementary-school teachers. The general movement which is represented by the book is certainly of the greatest importance to all who are concerned with the education of boys and girls.

Mr. Davis believes that the best way to deal with the problems of school discipline is through an organization of responsible activities on the part of the students. He has therefore gone far beyond the ordinary range of school discipline in his organization of the boys and girls of the community in which he lives. He has also presented in this book some of the results which seem to him to justify all of the work which he has done.

The Russell Sage Foundation has issued two more useful volumes.[2] The first deals with working girls in evening schools and the second with the care and education of crippled children. Both

[1] *Vocational and Moral Guidance.* By Jesse Buttrick Davis. Ginn & Co., 1914. Pp. 303.

[2] *Working Girls in Evening Schools.* By Mary Van Kleeck. 1914. Pp. 252.

Care and Education of Crippled Children in the United States. By Edith Reeves. Survey Associates, 1914. Pp. 252.

of these books contain a large body of information about activities along the lines indicated by their titles. Through a careful review of existing institutions and their methods these books tend to stimulate more intelligent activity along similar lines.

The girls in night schools represent an ambitious class of workers who for the most part are struggling with a difficult problem of adjustment to the needs of society. These girls, many of them, are from foreign homes where they have had no adequate opportunity to prepare for American life. In most cases they are from poor homes where the domestic opportunities for self-improvement are very meager. How they do their work, what courses they take, how regularly they attend their classes, and what ought to be done for the improvement of their conditions are problems of the largest social importance.

The second volume is somewhat more detailed in its suggestions as to advantageous methods of treating those with whom it is concerned. Detailed descriptions are given of the organization of children's homes and hospitals. The principles which should govern their care and training are also given in detail. The book will be a source of valuable information to anyone who is interested in this type of philanthropy.

It is coming to be common for publishers and authors to address books to parents who wish to be intelligent about the training of their children. The recent enthusiasm which has been exhibited for the Montessori system is very largely due to the fact that many parents have wished to give their children during the early years of life prior to their entrance into schools all of the advantages that are to be expected from a systematic, educational training at home.

A new book[1] intended to satisfy this demand has just been put out by the Century Company. This book contains in very accessible form many of the familiar games and rhymes of the sort that parents have always employed, together with some discussion of the way in which these should be used.

There are chapters on habit drill and chapters on story-telling and physical education, chapters on rhythmical plays, and some statements concerning manual training and occupations. In short,

[1] *Child Training.* By V. M. Hillyer. The Century Co., 1915. Pp. 299.

the book contains a large amount of very definite, concrete material which can be used by any intelligent parent.

A useful new book[1] is accompanied by a set of cards which make it possible to carry out in a practical way the exercises which are described in the book itself. The author has been very skilful in taking a number of the tests which have been recently suggested as well as some of the formal grammatical exercises which have long been familiar in the school, and has turned them into drill exercises by putting into the hands of the teacher the material which will make it very easy to carry on the work.

There can be no doubt at all that one of the important additions to the classroom equipment much needed in American schools is printed material such as charts and cards which will make it unnecessary to do much writing on the blackboard. In getting together devices of this type, the author and the publisher of this book and set of cards have performed a distinct service for teachers.

The importance of play in the modern school has frequently been emphasized. The American Playground Association was very active some years ago in promoting the organization, both in schools and in municipalities, of systematic types of recreation. Educational theorists have also been very emphatic in their statements that the work of the school would be greatly improved if the natural example offered by play were more generally accepted as the model on which school work is to be patterned. A new discussion[2] of the matter, therefore, is by no means foreign to the spirit of the educational discussions. In a volume which touches all aspects of the matter of play Mr. Curtis renews the plea for an emphasis on this type of activity in the schools and in municipalities.

It is unfortunate that the attitude adopted by Mr. Curtis is one which tends to throw play in its different forms into opposition to the regular school work. On p. 48 Mr. Curtis writes as follows:

> Not only has it been true that the things taught in the schools have had no close relationship to either the business or the social life of the ordinary citizen, but it has never yet proven true that effectiveness has been in direct

[1] *Language Games for All Grades.* By Alhambra G. Deming. Beckley-Cardy Co., 1914. Pp. 80.

[2] *Education through Play.* By Henry S. Curtis. Macmillan, 1915. Pp. 359.

proportion to knowledge, as there are many other elements besides information that go to make the effective individual; and self-confidence, energy, and a fixed purpose, with a small amount of information, ofttimes accomplish vastly more than encyclopedic knowledge without these accompaniments. In fact, it may well be questioned if encyclopedic knowledge on general subjects adds greatly to the effectiveness of the individual anywhere.

Childhood is essentially the motor period of life, and every idea tends to immediate expression in some form of action. From all biological and psychological studies it would appear that the mind was not intended for a bin or granary in which to store a wealth of knowledge, but that it was intended for a workhouse where knowledge should be gathered for immediate use and wrought into action almost as soon as it is gathered. The typical "grind" in school and college often uses his energy so completely in the acquisition of knowledge that he has none left to make this knowledge effective.

The spirit of these remarks is one which will hardly promote the most productive relationship between play and the general intellectual life which it is the business of the school to cultivate. There can be no doubt at all that the world at large is satisfied that arithmetic and Latin and the other subjects dealt with in the regular school work have value in preparation for the serious activities of both the trades and the professions. It is not necessary for arithmetic to show that each one of its problems can be utilized in some later practical situation. It is enough for the experience of the race to make it clear that the whole science of mathematics is worth cultivating.

On the other hand, the descriptions which Mr. Curtis has given of the actual facts in regard to the introduction of play in American schools and in American public life tend to refute his own extreme attitude with regard to the place of play in the course of study. The various chapters in which he gives an account of the place of play in German and English schools and in American cities, his discussion of play activities in the rural school and in the Gary system, his account of athletics in secondary schools and in summer camps, all tend to show that there is the largest harmony between the regular work of the school and play.

The book will also be useful to teachers because it gives in the appendix rules of most of the common games, so that not merely the argument in favor of play but also the material which can be employed by those who wish to introduce play commends the book to the ordinary reader.

CLASSROOM METHODS AND DEVICES

Problems in Geography—the Map

In a recent examination for a teacher's certificate given in a New England city, fifteen questions were asked; eleven and one-half of these, or nearly 75 per cent, were based on memory and belonged to the class of questions which have to do with location alone, two and one-half were economic in their intent and could be interpreted as geography questions only by the character of the answers, and one of the fifteen questions recognized geography as a relationship between the physical features and the organic inhabitants. If this may be taken as an index to the division of time devoted to geography in the grades and applied to a five-year course in geography from the fourth to the eighth grade inclusive, it would mean that nearly four years of the time should be devoted to the study of locations, about two-thirds of the remaining year to accessories or relevant items, and only one term to actual geographic presentation. Such a division of time cannot by any measure of efficiency be considered justifiable.

In the *Journal of Geography* for June, 1914, there is published a list of places recommended as suitable for thorough mastery by pupils in the schools of Springfield, Illinois, during their geography work of the fourth and fifth grades. In the list there are 371 places. The learning of these locations is not the geography work but a very necessary preparation for the work. It would be folly to use three-fourths of the time of the two years in learning and drilling on the list. The small number of names in the recommendation implies that there is something more to the subject, that there is a dynamic side as well as a static. This has been recognized in all our definitions of geography, whether relationship or response is the key-word, but teachers have not always acted accordingly. One difficulty which constantly arises lies in the inability to test with any degree of accuracy the stages of mental advancement. The examiner of teachers in the case stated at the beginning of this paper found it easier to test the memory than the reasoning power

of the candidates. And in any examination in geography questions on locations call for a definite and unequivocal answer. On the other hand, it is possible to examine reasoning processes in geography as concisely as in geometry, providing proper emphasis is placed upon the work during the school year. There is the danger here lest the teachers believe that the thorough mastery of the list is the only requirement, while for true geography work it is the basal requirement only. The lists represent the requirements of static geography. The time is not ripe for making out requirements of dynamic geography, but teachers should at least face in that direction. To use the knowledge that is gained is an aim in education, much more, perhaps, than is the acquisition of knowledge. Thus, if some means can be devised of applying knowledge in geography it will naturally follow that the testing in this new field will not lag far behind. Problems on the three main requirements of the map, the scale, the direction, and the legend, are recorded here. No claim of perfection is entered for them but they represent a type of work which aims at the ability to use knowledge. With each a number of questions are introduced which show a different type from the purely memory question. The work on scale and direction is much narrower in its scope than that on legend. In the latter instance a large variety of problems involving relationships and responses is possible.

SCALE

Scale is taught at the beginning of map work and afterward it is relegated apparently to the background as far as any future map work is concerned. The pupil sees in turn maps of South America on many scales, but little confusion arises from this because he easily adopts a ratio scale; confusion arises, however, when he jumps from a map of South America to a map of some other continent, as Africa. The inference is that the scale is the same. Thus, as in one of our leading textbooks, North America at 760 miles to an inch, South America at 640, Europe at 470, Africa at 840, Asia at 890, and Australia at 1,000 are an unfortunate variety unless the pupils make use of the scale. There are a number of problems here of more or less value which can be used to emphasize the scale, and they are largely scale determinations.

1. *By comparison of lengths.*—An outline map which the pupils are to use appears on the blackboard or on paper without a scale attached. The problem is to find the scale. By finding the same map in the textbook, the length and the scale of the textbook map are noted. The length of the given map is measured. It is known that the larger the map, the smaller the scale, or, in other words, the proportion is an inverse one, and our equation reads: the length of the map in the textbook divided by the length of the given map equals the unknown scale of the given map (the x) divided by the scale of the textbook map.

2. *By latitudes.*—This is a variation of the above. From the map in the textbook the pupils find the latitude of the northern and southern tips of the continent along a meridian and this yields the length of the map in degrees. In round numbers, using seventy miles as the length of one degree of latitude, the length of the map in miles can be found. Now by measuring the length of the given map and dividing its length in miles by its length in inches a good estimate of its scale is made.

3. *By comparative areas.*—The result of this yields, not a definite scale, but a ratio, and it is most effective when two maps of different scales are in use at the same time. For instance, a map of South America and a map of Australia are before the pupils. Two of the latitude lines for each map may be inserted near the edge—for South America, the equator, and the southern tropic. By subdividing the distance between these points into twenty-four parts a near approximation to one degree is gained. The pupils will be able to sketch roughly their own state. Pennsylvania is about two degrees in latitude and five in longitude. Upon the subdivisions just made draw a sketch of that state. Do the same thing for Australia. The resulting comparison which appears before the eye will indicate the diversity in the two scales. We can recognize the fact that degrees of longitude vary in the number of miles in different latitudes by the use of latitude distances alone, as Pennsylvania is two degrees in latitude and twice as wide, linear measurement, in longitude.

Upon these as a background a great variety of problems can be based which will make the study, not a theoretical, but a practical

one. For the upper grades, at least, it will call into use the knowledge which was gained in the earlier grade and will also emphasize the more important ideas concerning scale. And such questions as the following will show in their solution a process of reasoning rather than of memory.

1. Given a map of New England with political boundaries. If the northern boundary of Massachusetts is 42° 45′ N. Latitude and the northern boundary of Vermont is 45° N. Latitude, what is the scale of the map?

2. In the above map, knowing the scale, find the latitude of the northern boundary of Connecticut.

3. Draw an island 120 miles, north to south, by 40 miles, east to west, located at 43 S. Latitude and 75 W. Longitude, distances to be indicated by parallels and meridians.

DIRECTION

The most common mistakes in direction arise from the overlooking of the direction lines, parallels, and meridians on the map. This is the result of the bad habit of considering "up" as north, the "right" as east, and so on. The practical drill on direction must have for an objective the forming of a new habit strong enough to overcome the old; or better still the right habit in the first place. This means a recognition but not necessarily a training in the various nets for projection. For example, take the Mercator projection with horizontal parallels and vertical meridians, Flamsteed's with horizontal parallels and curved meridians, and the conic with curved parallels and straight but diverging meridians. The manner of making these nets need not be known, but it is well that the earmarks of each be learned so that the pupils may decide in most cases what the projection is. The drill in this case is to place two dots on the network and allow the pupils to state the direction one is from the other. Thus of two horizontal dots on the Mercator one will be east of the other, the same on Flamsteed's, but on the conic the direction will depend largely on the part of the map used, whether one point is northeast, east, or southeast of the other. The drill should be complete enough to show all the possibilities of the projections and the problem element based on the drill may reverse the operation.

1. Using two points marked *A* and *B*, draw a network which will make *B* east of *A*.

2. Using the same positions, make *A* southwest of B; northwest.

3. Using three points marked *A*, *B*, and *C*, draw a network making *B* south of *A* but west of *C*.

4. Using the same points, make *B* and *C* south of *A*.

LEGEND

While the interpretation of scale and direction is a part of map-reading and may properly be included under this heading, the term "legend" is usually confined to the conventional signs by which physical and political features are indicated. Many maps, especially the political, show little more than distribution. A few items like nearness to the sea and distance north and south of the equator are common to all maps. Political maps are the sources of most of the questions of static geography. Distribution is the result of physical conditions, and to the items already referred to as common to all maps there should be added as time goes on the general topography and the wind belts, the latter with the latitude yielding the climatic status. If, then, geography is really taught as a relationship or response, the general type of question which begins with "Where is" will give way to the type beginning "Why is." A great variety of drill exercises may be devised.

A. There is the class which is based on the resultant of the wind belts and the topography, including the migration of the planetary belts.

1. Draw the map of an area under the westerlies having a rainy and a dry region.

2. Draw a map of an area under the doldrums and the trades having a wet and a dry season.

3. Draw a map of an area with two rainy and two dry seasons per year.

4. Draw a map with an area with little rain throughout the year.

In drawing the maps, topography should be indicated by colors, the pupils using as nearly as possible the proper shades for mountains, highlands, uplands, and lowlands, and indicating the wind belts in the conventional way.

B. There is the class which has to do with the conditions of growth of vegetation and which differs from the above only in an added factor.

1. Rice demands warm temperatures during a long growing season and plenty of moisture. Draw a map of an area containing a rice area and a desert.

2. Grazing is carried on on mountain slopes not densely wooded and on semi-arid plains. Draw a map of a country having a rice area and a grazing-area.

C. To these may be added in turn a number of physical features.

1. Draw a map of a region including an area of interior drainage, a rice field, a coastal plain, and a heavily forested tract.

2. Draw a map of an area containing a manufacturing city dependent on the immediate neighborhood for its raw materials and shipping its wares to distant lands.

3. Draw a map of an area containing a large river and a seaport shipping hides.

4. Draw a map of a country growing coffee (on uplands in tropics under plenty of rain) and rice, with a large port and a city which may be used as a health resort.

As the experience of the pupils widens, most of the answers will represent actual places on the earth, although at the beginning the maps may be purely hypothetical.

In the preparation for this work, the teacher will find that her time limit will be a great restraint so that it will devolve upon her to select from a large array of examples. Each physiographic province of the earth may be treated in detail and many problems may be devised to test the pupils' grasp of the subject, but probably a typical case will be all that the teacher can afford to use because of other work, as, for example, the desert with its many variations: the desert under the trades; the desert on the leeward side of mountains; irrigation, the Nile case; irrigation, the Uncompaghre case; oases; and many others.

The result of such exercises as have been indicated will meet more nearly the requirements which geography workers should insist upon, and certainly the work of the schools both in place geography and in this study of relationships will receive thereby a better balance.

ROBERT M. BROWN

PROVIDENCE, RHODE ISLAND

THE WORK OF THE INTERMEDIATE SCHOOLS OF LOS ANGELES[1]

The principals of the Los Angeles City Intermediate Schools herein submit a brief report of the work undertaken in the intermediate schools during the school year 1913–14.

We take the liberty of quoting from the report of the Committee on Readjustment of the Course of Study and the Certification of Teachers, of which Committee Dr. Alexander F. Lange, dean of the College of Education, University of California, was chairman. The report as presented to the Council of Education and printed in the *Sierra Educational News*, September, 1912, refers among other matters of vital importance to the establishment of intermediate schools, in part, as follows:

In the judgment of the committee and in agreement with a growing national tendency, an adequate readjustment of the course of study calls for a revision of the traditional grouping of the grades constituting the "educational ladder." Both the first two years of the typical American college and the last two years of the typical American grammar school belong within the boundary lines of secondary education. In other words, the end of the sixth grade and the end of the fourteenth grade should be regarded as points of articulation, along with other points to be discussed later on. It is coming to be generally recognized that under our present arrangements secondary education begins too late and that for the majority of the high-school graduates it ends too early, while for those who take a full college course it again ends too late if the whole of such a course is devoted to purely cultural or man-centered aims.

The reason for selecting the end of the sixth grade and the end of the fourteenth grade as points of articulation may be summarized as follows:

1. On physiological and the psychological grounds, such regrouping is better adapted to the stages of development from childhood to manhood and womanhood.

[1] At the request of the editors of the *Elementary School Journal*, Superintendent Francis, of the schools of Los Angeles, California, has given his permission to publish a communication which was addressed to him in the form of a report by those who are responsible for the details of the organization of the intermediate schools of that city. The report is presented without any attempt to change the form in which it was originally submitted to the superintendent of schools of Los Angeles.

2. The economic conditions of modern American life are such that, by regrouping thus, more complete and more continuous educational opportunities can be devised for more individuals, both at or near the end of the elementary-school period and at or near the end of the secondary-school period.

3. The conception of a six- or eight-year secondary period renders it practically far easier to plan equitably and adequately for the complete needs, cultural and vocational, of all adolescents.

4. Such a regrouping is in agreement with the best European experience and practice, but voids the social cleavage of the old world. Moreover, American state universities already recognize more or less explicitly the end of the fourteenth grade as the turning-point from secondary education to university training.

The committee notes with satisfaction the progress of the plan whereby the pupils of the seventh, eighth, and ninth grades are grouped together. The plan tends to break up the traditional notions about the grouping of grades. It secures prolongation of formal education for many who would otherwise drop out of school. It furnishes an opportunity through optional courses for better occupational preparation as well as better preparation for the more advanced high-school grades. Above all, it facilitates the closing of the gap that now exists between the material and methods of the grammar school and those of the high school.

An examination of the percentage of attendance in the various grades of the Los Angeles City School, 1896 to 1911, shows that the average "dropping out" in the higher grades as based on relative enrolment of pupils was as follows: fifth grade, 18 per cent; sixth grade, 20 per cent; seventh grade, 30 per cent; eighth grade, 17 per cent; ninth grade, 54 per cent; tenth grade, 45 per cent; eleventh grade, 28 per cent.

It will be noted that most of the pupils completing the eighth grade entered the high school, but that more than three-fourths of them did not enter the eleventh year. The causes of this falling out are many, but lie chiefly in the fact that the average pupil has not been prepared through his experiences in the grammar school to meet the problems which enter his life as a high-school student.

In the ordinary grammar school we have pupils of all ages from six to sixteen, and if a kindergarten be connected with the school, as it usually is, from four to sixteen years. The extremes in such a case are very great, and it will be impossible to have a school

which will return the most for either group, the adolescents or the preadolescents. A school to be successful must be a social unit; but if the extremes in the moral, physical, and intellectual development of its members be great the institution will usually develop at one end or the other. If the school be managed for the good of children who need motherly care and watchfulness (this is the case in elementary schools), then the older children are deprived of the freedom necessary for their development. The great majority of these pupils, lacking individuality and initiative, are not prepared for the freedom allowed them as members of a high school. This is evidenced by a neglect of lessons, irregular attendance, and a dropping out of school.

In the intermediate school, however, every precaution is used to avoid the break between the sixth and seventh years that formerly existed between the eighth and ninth. Here the transition from grade work to departmental work is more gradual.

The restless, changing period of adolescence covers about three years, including generally the period of the seventh, eighth, and ninth grades of school. In these grades the interests are similar and methods of discipline should be about the same for all but very different from those of the lower grades. Under careful guidance, children reaching out after the responsibilities of life are given an opportunity to assume them.

The teachers who would be the friends and advisers in this new plan must be chosen with great discrimination. The handling of children from eleven to sixteen years of age requires a broad sympathy that is founded only on wide experience, and preparation must be quite complete. Boys and girls of this age are prone to be critical of their elders, yet childlike and imitative. They are at the age when hero-worship is a great factor in their development. How important, therefore, that the personality of the teacher be an inspiration to them.

The work is specialized, and the general plan of organization is the same as that of a high school. The value of the mother-teacher of the elementary school is remembered, and the work is so planned as to avoid a break between the elementary and intermediate school.

COURSE OF STUDY

English.—The first and fundamental requirement in any process of education is the acquisition of the language. Its necessity is so imperative that English is made a solid in every course and year of the intermediate school. The subject is divided into five branches: technical grammar, composition, literature, oral expression, and spelling.

To create a love for literature is to provide the pupil with one of the most potent forces for future self-education as well as a means of ever-increasing enjoyment. By the use of literary masterpieces in the seventh and eighth grades as well as in the ninth, the scope of the reading-lesson is enlarged. The library, which is maintained in each school, supplies many magazines and books, and, since its management is largely in the hands of the pupils themselves, an intimate association with books is encouraged.

An increased interest in technical grammar is due largely to the fact that 70 per cent of the pupils in the intermediate school study a foreign language. As a language is usually begun in Grade VII B, the necessity for technical grammar as a basis of correct sentence structure is early emphasized. Special classes have been organized for backward pupils or those who have found difficulty in some phase of the English work.

Better opportunities are offered in composition through the school paper and programs given in the school auditorium. Oral expression is given special attention and is emphasized in book reviews, plays, and debates.

Spelling is made a distinct branch of daily work and every pupil is required to spell regularly.

Mathematics.—The work in mathematics consists of arithmetic in the seventh grade, algebra in the eighth and first half of the ninth, and geometry in the last half of the ninth grade. Commercial arithmetic is offered as a required subject for pupils in the commercial course in the ninth grade. Arithmetic is required of all pupils in the seventh grade. The VII B work includes the material usually offered in that grade plus a large amount of review work made possible by reason of the greater time devoted to the subject. In grade VII A the girls and boys are separated into

different classes and the work is varied accordingly. With the boys the emphasis is put upon the practical side of arithmetic in connection with shop problems, etc., while the girls are taught household accounting, house furnishing, division of recipes, etc.

In algebra three terms are devoted to what is usually done in the first year in high school, the additional time being given to drill work, thus greatly reducing the percentage of failures.

The geometry offered in IX A is that commonly offered in the first half of the tenth year in high school.

Foreign languages.—The introduction of the foreign languages in the intermediate school has come as a result of the fact, long recognized by the best teachers of the languages, that students intending to take up such work should do so at an earlier period of life than is customary. Foreign schools have taken cognizance of this and placed the beginning of such study at least two years before the usual time of taking up language-study in this country.

Several reasons may be advanced for this contention, among which may be mentioned the greater imitative powers of the younger student resulting in better pronunciation, and an adaptability to the demands of a new language with little or no feeling of self-consciousness. The same methods are used as in the high school, but much more attention is given to the conversational side of instruction. Only those features of technical grammar are introduced at first which will serve to master the particular difficulty under consideration. The aim has been to base the work upon the interests of the child rather than upon conjugations and declensions, and the other intricacies of technical grammar. The course has been arranged so that the earlier part has much in it pertaining to the everyday life and environment of the student. By degrees the formal part of grammar is introduced until, at the end of the course, not only much practice in conversation has been given, but also the technical elements have received their proper amount of emphasis.

The languages offered are Latin, French, German, and Spanish, the entire course covering three years' work. The result of three years' experience has been on the whole gratifying, and pupils completing the intermediate work satisfactorily have been able

to take up the work of the third year of high school, thus saving a year of the high-school course in foreign language.

History.—The reality of history is the life and progress of mankind; but this appreciation may be gained only through a broad knowledge of the world and a careful training in its records. Intermediate schools are privileged in having teachers trained for high schools, by travel and higher educational institutions, and in having well-equipped libraries.

Seventh- and eighth-grade history classes take a careful elementary survey of United States history and spend about five months on the study of civics, including topics of the day. Current events and the political situation are made real and alive by debates and class discussions, and an attempt is made to train boys and girls for the duties and obligations of citizenship by imposing questions of self-government and responsibility regarding the rights of others in the school itself as a democratic community.

Ancient history is introduced in the ninth year by a brief survey of the earlier civilizations, followed by the story of the Greeks to the Persian wars, when a more detailed study is made of the eastern nations. The rest of the term is devoted to the great and virile periods of the leading Greek cities; emphasizing art through pictures, literature through well-chosen selections, and Greek ideals through biography and story. The political and economic development of the Roman republic is followed by a study of the Roman empire in Italy and in the provinces.

Home economics.—The underlying purpose of the course in home economics is to create and develop individuality, efficiency, and self-dependence, giving the girl a better understanding of the duties of women as producers and consumers, and intensifying the interest in all matters pertaining to the home and the extension of its influence.

In sewing, our girls have been taught to make the garments they wear, to do fancywork, to design costumes, and are given lectures on textiles and on economy in the purchase and use of materials. Many of our girls wear simple dresses that they have made themselves.

In cooking, a systematic study is made of the production and manufacture of food materials, their wholesomeness and digestibility, nutritive value and cost. Constant training is given in order, neatness, methods of cleaning, care and use of utensils, and laundry work. The actual preparation and serving of simple meals—breakfasts as well as luncheons and dinners—each week, the careful consideration of their cost and proper balance in nutritive values, have shown splendid practical results. Throughout all the work an effort is made to keep a high ideal of the dignity of labor and to apply the principles learned to the problems of everyday life. Each school maintains a cafeteria in which pupils may secure a noon lunch at as near cost as possible. Much of the preparation of food, the serving, and the managing is done by the pupils. The cooking department provides such food as may furnish lessons for demonstrations in cooking classes. In most schools the general management of the cafeteria is assigned to the teacher of cookery, who supervises the various phases of the work.

Woodwork.—The intermediate school through its woodshop offers to the boy double the amount of manual training heretofore given in the seventh and eighth grades. In the ninth year he is permitted to elect the work if he so chooses. Well-selected type forms are first given, and to these the boy may add supplemental models as his peculiar ability and needs may direct. Independence, both in the form of design and in the peculiarity of construction, as well as in the work itself, is developed. Thus the boy gains through the woodshop the self-confidence necessary to the proper mastery of himself.

The addition of several of the elementary wood-working machines to the regular bench equipment has done much for the efficiency of this department.

Bookkeeping.—The subject of bookkeeping is an elective in the seventh grade and is continued throughout the three years' course. The strongest argument in favor of introducing it at this time is that the children like it and become more enthusiastic over it than do the pupils of regular high-school age. Many pupils of the seventh and eighth grades have not learned to get the exact meaning from a printed sentence or paragraph. They soon realize that

only a partial understanding of even one sentence means failure. Here is their first opportunity for a practical application of their knowledge of arithmetic, and they soon learn that accuracy is essential to success.

Only the simplest elements of bookkeeping are presented during the first year, and the transactions are kept well within the experience and comprehension of the child. The aim is to educate the child rather than to make of him a professional bookkeeper. In the eighth grade the pupil writes checks, notes, drafts, etc. He learns the meaning and importance of leases, contracts, and deeds; how real estate is transferred; and how and why contracts and deeds are recorded. He keeps the accounts of business transactions involving the use of such papers, and by this time he has learned to make financial and business statements, and to close a set of books with a considerable degree of accuracy. In the ninth year, besides continuing the work of the previous grades, the pupil is expected to study something of the workings of a bank and to learn the purpose of corporations and how they are formed. The aim throughout the entire course is to give such training as will be of value to any boy or girl, whatever his or her position in life may be.

Stenography.—The subject of stenography seems peculiarly adapted to the intermediate schools. The shorthand satisfies the longing which comes to the heart of every child for a secret method. It satisfies his desire for "short cuts." He acquires with great satisfaction the ability to record whole sentences with but a few strokes of his pencil. The method used is simple, based upon syllabic sounds.

Typewriting requires neatness, accuracy, carefulness, and a knowledge of spelling and composition. The touch method only is used. Children at this age have the required ability and skill, and are delighted with this work which centers about the coordination of hand and mind.

While the power of children in the intermediate schools to grasp the subject of stenography is limited by their general development, the chief aim of the study consists in its educational power rather than in making expert office workers. As a factor in retain-

ing the interest of the student, in developing the power of concentration and close application, in making familiar the terse, simple English and good business forms, it is unequaled.

Music.—Instruction in music is given in the seventh grade and half of the eighth grade and is made elective in the ninth grade. In addition to regular class work in music the schools organize choruses, glee clubs, orchestras, etc., and encourage individual effort. Instrumental as well as vocal selections by individuals and groups have a very beneficial effect upon performer and hearer. They inspire all to renewed effort and give a keener appreciation of the good in music.

Drawing and applied arts.—The object of drawing and applied arts is to stimulate the need for beauty in all the practical things of life. It strives to bring about perfection in line proportion and color while developing a perfect workmanship. It is the aim that pupils should observe, choose, and create things of usefulness and beauty, and having learned discrimination from the world of things to make finer choices in the mental and moral problems of life. They are expected to carry the subjects farther each year, and more opportunities are given to apply what they learn to articles of use to themselves and their friends or to the school. Designs are worked out in leather, metal, clay, embroidery, or stenciling, varying according to the conditions or equipment of the different schools.

Color harmony is studied in relation to dress, suitable combinations, for boys—suit, cap, tie, and shirt; for girls—dress, hair ribbons, coat, and hat. Designs for embroidery of underwear and simple dresses or collars are made in white and in colors and are carried out in the sewing department. Color is also studied in relation to the furnishing of a room and the arranging of a garden. The work is correlated with other school interests through book covers and posters.

Mechanical drawing.—The aim of the mechanical drawing course is threefold: to develop accuracy and neatness while forming a knowledge for making and reading plans and drawings; to stimulate the ability to sketch and to turn sketches into working plans; and to train boys who want to take up draughting as a

business. The course includes freehand and block lettering, working drawings from woodshop and machine objects, sketching, a few geometric problems, projections, section, intersections, triangulation, architectural drawings, and lettering.

Penmanship.—Penmanship is required in the seventh year in all courses. It is an elective in the eighth and ninth years in the general course. In the commercial course it is required the first two years, and is an elective in the ninth year. The endeavor is to teach the pupil to write a good rapid style, combining ease, legibility, and endurance.

Geography.—In the first half of the seventh grade the pupil finishes the course in geography. The work consists of a brief summing up of the important facts concerning each of the grand divisions, but Europe is taught in detail. The United States, and especially California, are studied in their relation to other countries.

The interest in foreign countries is broadened by the abundant use of pictures, by short stories depicting the life of the people studied, and also by brief sketches of the lives of their noted characters. In some classes it has been possible to make use of the balopticon to great advantage in reflecting suitable pictures for class exercises. The school library has proved a great help in enlarging and making real the subject-matter.

Physiology.—Physiology is taught in grades VIII B and VIII A. Instruction is given in the science laboratory, where experiments before the class emphasize the subject-matter of the course. To help the developing boy and girl not only to know facts relating to the body but to make use of them at the most impressive period of his or her life is made the chief aim.

Physiography.—The work of the ninth year in physiography is identical with the first-year high-school science. The aim of the work is twofold, viz., to implant within the pupil a love for the study of science and to give him a better understanding of everyday phenomena. It introduces him to all the physical and biological sciences and thus gives him a foundation for an intelligent choice in further work in science.

Physical training.—The work in physical training is carried on under the direction of competent instructors employed on the same basis as teachers of other subjects. Two periods a week are required of all pupils unless excused on account of ill health. For the girls, the work consists of marching, running, calisthenics with or without apparatus, folk-games, gymnastic games, indoor and volley-ball. The boys are given work with dumbbells, Indian clubs, tactics, and free play in such games as soccer, basket-ball, volley-ball, indoor and outdoor baseball, and track work. In these games the boys are divided into three classes according to size so as to include everyone.

The attempt is made with both boys and girls to cultivate in them a desire for, and a love of, play, and to build up good, healthy bodies. Practically all the work is done in the open air. The endeavor has been to have all pupils enter into the games rather than to develop expert teams to represent the various schools in contests.

School activities.—The grouping together of the seventh, eighth, and ninth grades has placed in one school boys and girls of about the same age, tastes, and interests. This has made possible some form of student government in each school whereby students assume control of various student activities under their own officers and student administration. The policy here stated is in line with the present-day feeling that if our democracy is to prosper the beginnings must be laid in the public school, and students must early be taught the duties and responsibilities that fall upon the individual in a democracy. The adolescent child is at a most impressionable age and the ideals developed at this time are enduring in character. Because of this fact and the further fact that school life for many must terminate during these years, it is all the more important that the student become familiar as soon as possible with the life of the larger community of which he is later to become a member.

All of the intermediate schools have placed certain phases of school administration and school activity under student control differing in each locality according to the varying conditions that

are encountered. It is the consensus of opinion that there has arisen in pupils a better attitude toward school and a greater desire to co-operate in those things that make for a more wholesome school atmosphere.

Debating teams, camera clubs, orchestras, and glee clubs have been organized. Athletics are largely inter-class rather than inter-school, the aim being to develop many instead of the few who make up a team. Physical directors have had charge of week-end hikes to the mountains or the seashore with groups of boys or girls. Student bookstores provide for exchange of textbooks, and lunch counters or cafeterias furnish generous hot lunches on the school grounds.

Adjustment of high schools to intermediate schools.—As might have been anticipated, the problem of adjustment was one of the first to confront those directing the two types of schools. The courses have been so arranged that pupils enter the intermediate school from the elementary school without question. The more serious problems lay in the proper adjustment between high and intermediate schools. The newness of the plan rendered it a difficult matter to judge accurately as to how much might be done in the new type of school. The question has been in the hands of a committee composed of both high and intermediate principals and teachers. A general desire on the part of the high schools to co-operate has helped materially to make the problem less difficult.

The more delicate phases of adjustment have arisen in the subjects which are found in the two schools, such as the commercial branches and the foreign languages. The beginner in the intermediate school, because of his greater immaturity of mind, will not be able to parallel the work of the beginner in the high school. In all cases, however, it has been found possible to recommend that students covering the full course of the intermediate school be allowed advanced standing in the high school; or, in other words, the work done herein carried the student farther than if he had delayed electing the subject until entering high school. The average number of high-school credits received by the pupils in Grade IX A in five schools, June, 1914, was 11.1, which was a saving of almost one half-year of high-school attendance.

Statistics relative to intermediate schools follow:

TABLE I

ENROLMENT OF PUPILS OF THE SEVENTH, EIGHTH, AND NINTH GRADES

Year 1913–14	Seventh	Eighth	Ninth	Total
In intermediate schools	2,774	2,339	948	6,061
In grammar schools	2,755	2,280	.....	5,035
In night schools	628	1,515	.....	2,143
In high schools	.....	.....	2,984	2,984
Total	6,157	6,134	3,932	16,223

TABLE II

NUMBER OF TEACHERS EMPLOYED AND THEIR CERTIFICATION

School	Teachers	High-School Certificate	Special Secondary Certificate	Elementary Certificate
Lincoln High School	49	33	15	1
Custer Ave. Intermediate	27	10	15	2
Virgil Ave. Intermediate	24	14	8	2
Berendo St. Intermediate	26	12	13	1
Sentous St. Intermediate	28	14	14	.....
Thirtieth St. Intermediate	39	19	20	.....
McKinley Ave. Intermediate	35	11	21	3
Fourteenth St. Intermediate	32	13	16	3
Boyle Heights Intermediate	43	17	18	8
Total	303	143	140	20

TABLE III

SALARIES RECEIVED BY TEACHERS (12 PAYMENTS)

Salary per month	$62	$74	$82	$86	$94	$98	$100	$105	$110	$115	$120	$125	$130
Teachers employed	1	1	2	1	1	1	22	7	21	22	16	21	187

TABLE IV

NUMBER OF PUPILS ENROLLED IN VARIOUS COURSES AND SUBJECTS, MAY, 1914

Grade	General Course	Commercial Course	Vocational Course	Total
VII B	1,386	89	10	1,485
VII A	1,360	140	1	1,501
VIII B	1,079	115	23	1,217
VIII A	974	131	49	1,154
IX B	658	123	52	833
IX A	501	87	31	619
Total	5,958	685	166	6,809
Boys	2,980	315	96	3,391
Girls	2,978	370	70	3,418

Algebra	1,970	Geography	1,485
Arithmetic	2,986	History, United States	3,786
Bookkeeping	1,643	History, ancient	614
Commercial arithmetic	482	Music	4,407
Cooking	2,662	Oral English	1,679
Drawing, freehand	3,347	Penmanship	3,701
Drawing, mechanical	500	Physiography	615
English	6,809	Physiology	2,371
Foreign languages:		Sewing	2,993
French	497	Spelling	6,809
German	816	Stenography	1,737
Latin	596	Woodwork	2,773
Spanish	2,819		

TABLE V

AMOUNT OF HIGH-SCHOOL CREDIT ALLOWED TO PUPILS OF INTERMEDIATE SCHOOLS

Subjects	VII B	VII A	VIII B	VIII A	IX B	IX A
Algebra	.....	.....	½	½	1	.....
Ancient history	.....	.....	.....	.....	1	1
Bookkeeping	½	½	½	½	½	½
Commercial arithmetic	.....	.....	.....	.....	1	1
Cookery	.....	.....	.....	.....	½	½
English	.....	.....	.....	.....	1	1
Freehand drawing	.....	.....	¼	¼	½	½
French	½	½	½	½	1	1
Geometry	.....	.....	.....	.....	.....	1
German	½	½	½	½	1	1
Latin	½	½	½	½	1	1
Mechanical drawing	.....	.....	½	½	1	1
Music	.....	.....	.....	.....	⅛	⅛
Glee Club orchestra	.....	.....	.....	.....	⅛	⅛
Oral English	.....	.....	.....	.....	½	½
Penmanship	.....	.....	.....	.....	½	½
Physiography	.....	.....	.....	.....	1	1
Sewing	¼	¼	¼	¼	½	½
Spanish	½	½	½	½	1	1
Stenography	½	½	½	½	1	1
Woodwork	¼	¼	¼	¼	½	½

TABLE VI

AGE ON SEPTEMBER 1, 1914, OF PUPILS PRESENT OCTOBER 30, 1914, IN INTERMEDIATE SCHOOLS

AGES OF BOYS

Age	10	11	12	13	14	15	16	17	18	19	20	Total	Average Age
Grade VII...	7	104	350	429	313	137	39	6	0	0	1	1,386	13.11
Grade VIII..	2	28	118	279	383	222	59	6	2	1	0	1,100	13.78
Grade IX....	0	0	15	78	240	209	136	35	7	2	1	723	14.72
Total.....	9	132	483	786	936	568	234	47	9	3	2	3,209	13.70

AGE OF GIRLS

Age	10	11	12	13	14	15	16	17	18	19	20	Total	Average Age
Grade VII...	8	108	387	403	250	82	30	2	0	0	0	1,270	12.9
Grade VIII..	0	6	96	368	186	57	9	1	0	0	0	723	13.3
Grade IX....	0	0	7	71	274	256	90	20	1	0	0	719	14.57
Total.....	8	114	490	842	710	395	129	23	1	0	0	2,712	13.4

TABLE VII

PUPILS GRADUATING FROM GRADES VIII A AND IX A OF INTERMEDIATE SCHOOLS

Grade VIII A	February, 1914	Per Cent	June, 1914	Per Cent	Total	Per Cent
Number of graduates.....	667		883		1,550	
Returned to the same school.	525	78.7	665	75.1	1,190	76.7
Transferred to intermediate schools.....	29	4.3	14	1.5	43	2.7
Transferred to city high schools.....	52	7.7	69	7.8	121	7.8
Entered private schools	10	1.4	14	1.5	24	1.5
Out on account of sickness, travel, etc.	9	1.3	13	1.4	22	1.4
Left the city.....	15	2.2	57	6.4	72	4.6
Working.....	27	4.0	51	5.7	78	5.0

Grade IX A	February, 1914	Per Cent	June, 1914	Per Cent	Total	Per Cent
Number of graduates.....	355		479		834	
Transferred to city high schools.....	307	86.4	435	90.8	742	88.9
Entered private schools.....	7	1.9	6	1.2	13	1.5
Out on account of sickness, travel, etc.....	9	2.5	8	1.6	17	2.0
Left the city.....	8	2.2	7	1.4	15	1.7
Working.....	24	6.7	23	4.8	47	5.6
Average high-school credits ..	9.5		10.65		10.2	

Average high-school credits of the IX A pupils in the five intermediate schools maintained for three years was 11.1.

TABLE VIII

PERCENTAGE OF THE PUPILS IN VARIOUS GRADES AND YEARS

Year	In Kindergarten to Grade VI	In Grades VII–IX	In Grades X–XII
1896–97	84.4	13.3	2.6
1897–98	83.4	13.4	3.2
1898–99	83.0	13.8	3.4
1899–1900	81.7	14.2	3.4
1900–1901	83.2	13.7	3.2
1901– 2	83.5	13.4	3.1
1902– 3	82.8	14.3	3.0
1903– 4	82.4	14.9	2.8
1904– 5	82.3	15.2	2.7
1905– 6	79.6	16.6	3.0
1906– 7	79.8	16.6	3.4
1907– 8	78.0	17.8	3.8
1908– 9			
1909–10	75.8	19.5	4.8
1910–11	74.9	19.9	5.1
1911–12	74.2	20.0	5.4
1912–13	73.8	19.7	6.3
1913–14	73.3	20.3	6.6
	Average of the first seven years:		
1897–1903	83.2	13.7	3.1
	Average of the second seven years:		
1904–11	79.0	17.2	3.6
	Average of the last three years:		
1911–14	75.8	20.1	6.1

ADVANTAGES OF THE INTERMEDIATE SCHOOL

1. It offers an opportunity to elect subjects suited to individual needs.

2. It gives departmental instruction under specialists and prepares students to meet the requirements of higher schooling.

3. It saves time by pursuing subjects rather than grades.

4. It provides better organization and equipment.

5. It encourages intelligent self-direction through student government and student activities.

6. It enables students to come in contact with more men teachers.

7. It furnishes an opportunity to correct mistaken judgments with regard to studies and courses with less serious results than in the high school.

8. It makes easier a second differentiation of work at the end of the three years.

9. It overcomes the temptation to drop out of school at the end of the compulsory period, or the eighth year. Pupils are doing high-school work and remain in school.

10. It provides more schools and hence makes them more convenient to all.

11. It takes the student at the beginning of the adolescent period, the most important period of life.

STANDARD TESTS AS AN AID TO SUPERVISION

HENRY A. LANE
Houghton, Michigan

During the latter part of October, 1913, the writer conducted the Courtis standard tests in arithmetic (Series B) consisting of four tests, one in each of the four operations, with a time allowance of six minutes for multiplication, four minutes for subtraction, and eight minutes for each of the other operations. The subjects were about five hundred pupils distributed in thirty-five classes in four schools in Houghton, Michigan. The results of the test for each class were tabulated and graphed; but as this gave groups that were too small, tabulations and graphs were made for the system as a whole, thus giving ten groups of approximately fifty individuals each. These results are shown in the accompanying graphs and table (Table I and Charts I and II). The abscissas represent the grades from 4B to 8A and the ordinates represent the number of examples. Full lines indicate the number of examples attempted and dotted lines the number of examples right.

Taking the curves for addition, it seemed a singular comment on the efficiency of our educational system that four years of arithmetic teaching should increase a child's score in attempts from 4.5 to 9.2, rights from 1.1 to 4.0, and in accuracy from 24 per cent to 43 per cent; that is, an 8A child can do only 5 more examples in 8 minutes than a 4B child, can get only 3 more right, and can work only 20 per cent more accurately. Furthermore, the shape of the curves indicated a very uneven development of ability through the school course.

These were the facts. What was to be done? Knowing what some of the best of the thirty-five classes tested had done, a curve was drawn for the number of addition examples attempted, allowing for a growth of from 5 examples in the the 4B grade to 12 examples in the 8A grade, and a curve for the number of examples right was constructed ranging from 2 examples in the 4B grade to 10 examples in the 8A grade; the growth in accuracy is thus from

TABLE I

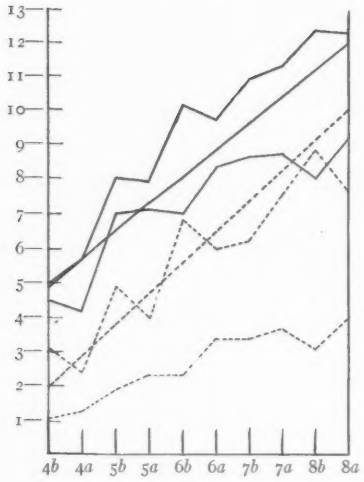
TABLE I

Grade	Source of Score	No. of Pupils	Addition			Subtraction			Multiplication			Division		
			Attempts	Rights	Percentage of Accuracy	Attempts	Rights	Percentage of Accuracy	Attempts	Rights	Percentage of Accuracy	Attempts	Rights	Percentage of Accuracy
4B	October, 1913	44	4.5	1.1	24	4.5	0.8	18	3.0	0.9	30	.....	.....	.....
	June, 1914	49	4.9	3.1	63	4.4	1.8	41	4.2	2.6	62	2.6	0.7	27
	Standard	.....	5.0	2.0	40	5.0	2.0	40	4.0	1.6	40	4.0	1.6	40
4A	October, 1913	44	4.2	1.3	31	5.7	3.2	56	4.8	2.4	50	3.3	1.2	36
	June, 1914	52	5.7	2.4	42	5.5	3.4	62	4.4	2.9	66	3.3	1.6	48
	Standard	.....	5.7	2.9	51	5.7	2.9	51	4.9	2.4	49	4.9	2.4	49
5B	October, 1913	60	7.0	1.9	27	6.6	3.5	53	4.9	2.3	47	3.9	1.2	31
	June, 1914	49	8.0	4.9	61	7.7	6.3	82	6.2	4.3	69	4.8	3.2	67
	Standard	.....	6.5	3.8	58	6.5	3.8	58	5.8	3.4	59	5.8	3.4	59
5A	October, 1913	50	7.1	2.3	32	7.8	3.3	42	5.4	2.5	46	4.1	2.0	49
	June, 1914	53	7.9	4.0	51	8.7	6.7	77	6.5	3.9	60	5.9	4.7	80
	Standard	.....	7.3	4.7	64	7.3	4.7	64	6.6	4.4	67	6.6	4.4	67
6B	October, 1913	48	7.0	2.3	33	7.5	4.6	61	6.1	2.6	43	4.0	1.5	38
	June, 1914	58	10.1	6.8	67	10.0	7.6	76	8.4	6.1	73	7.4	5.9	80
	Standard	.....	8.0	5.6	70	8.0	5.6	70	7.5	5.3	71	7.5	5.3	71
6A	October, 1913	60	8.3	3.4	41	8.6	5.1	59	7.0	3.5	50	4.4	2.6	59
	June, 1914	48	9.7	6.0	62	10.3	8.0	78	8.6	5.3	62	8.0	5.7	71
	Standard	.....	8.8	6.5	74	8.8	6.5	74	8.4	6.2	74	8.4	6.2	74
7B	October, 1913	68	8.6	3.4	40	9.5	6.0	63	7.9	4.1	52	6.6	4.6	70
	June, 1914	55	10.9	6.2	57	10.9	8.4	77	9.0	6.1	68	7.5	5.7	79
	Standard	.....	9.6	7.4	77	9.6	7.4	77	9.3	7.2	77	9.3	7.2	77
7A	October, 1913	44	8.7	3.7	43	10.8	6.5	60	7.9	3.8	48	6.7	4.3	64
	June, 1914	72	11.3	7.5	66	12.8	9.9	77	10.8	8.1	75	12.3	10.1	82
	Standard	.....	10.4	8.2	79	10.4	8.2	79	10.1	8.1	80	10.1	8.1	80
8B	October, 1913	46	8.0	3.1	39	11.5	7.2	63	9.4	4.4	47	8.5	5.7	67
	June, 1914	43	12.4	8.8	71	13.3	11.3	85	10.9	8.2	75	10.3	9.0	87
	Standard	.....	11.2	9.1	81	11.2	9.1	81	11.0	9.0	82	11.0	9.0	82
8A	October, 1913	36	9.2	4.0	43	13.0	7.4	57	10.5	5.3	50	10.0	6.4	64
	June, 1914	44	12.3	7.6	62	13.5	11.3	84	11.5	8.3	72	12.7	10.0	79
	Standard	.....	12.0	10.0	83	12.0	10.0	83	12.0	10.0	83	12.0	10.0	83

CHART I

HOUGHTON, MICH. 523 PUPILS

Addition



Subtraction

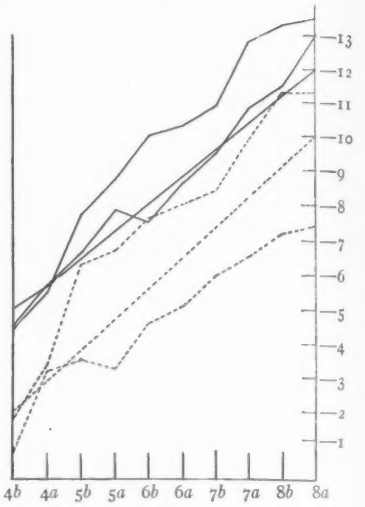
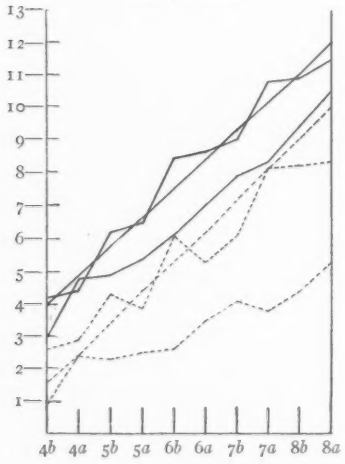


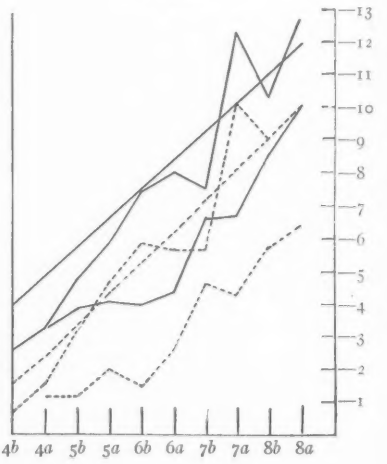
CHART II

HOUGHTON, MICH. 523 PUPILS

Multiplication



Division



40 per cent to 83 per cent. To insure a uniform development throughout the grades, these curves were drawn as straight lines, and the scores for each grade were plotted from the curves. This gave goals to be attained by each grade at the expiration of the school year. Similar tentative standard curves were drawn for the other operations. The pupils as well as the teachers were informed what the standards are so that all could co-operate toward attaining them. Periodical tests similar in construction to the Courtis tests but with modifications in the time allotment were made a feature of the arithmetic course of study, the children keeping a record of their scores and watching their growth; and it was hoped that in June, 1914, the tentative standards would in the majority of the grades be attained. The writer was of the opinion that the inefficiency of arithmetic instruction was not due to faulty method so much as to the fact that teachers and pupils did not know definitely what was expected of them. He therefore placed in the hands of each teacher a copy of the following announcement:

In June there will be another Courtis test of the same type as the one given in October. At that time, the grades are expected to attain the following standards:

	Addition and Subtraction		Multiplication and Division	
	Attempts	Rights	Attempts	Rights
4B	5.0	2.0	4.0	1.6
4A	5.7	2.9	4.9	2.4
5B	6.5	3.8	5.8	3.4
5A	7.3	4.7	6.6	4.4
6B	8.0	5.6	7.5	5.3
6A	8.8	6.5	8.4	6.2
7B	9.6	7.4	9.3	7.2
7A	10.4	8.2	10.1	8.1
8B	11.2	9.1	11.0	9.0
8A	12.0	10.0	12.0	10.0

Work in the four operations must be stressed. These are tentative and minimum standards. They will very likely be raised next fall. The success with which classes achieve these standards will, in a sense, be a measure of teaching ability.

At the close of the school year in June, 1914, another measurement was made and the results were very gratifying, as can be seen by examining Table I and graphs (Charts I and II). The straight

CHART III

HOUGHTON, MICH., GROWTHS. 405 PUPILS, OCTOBER, 1913, TO JUNE, 1914

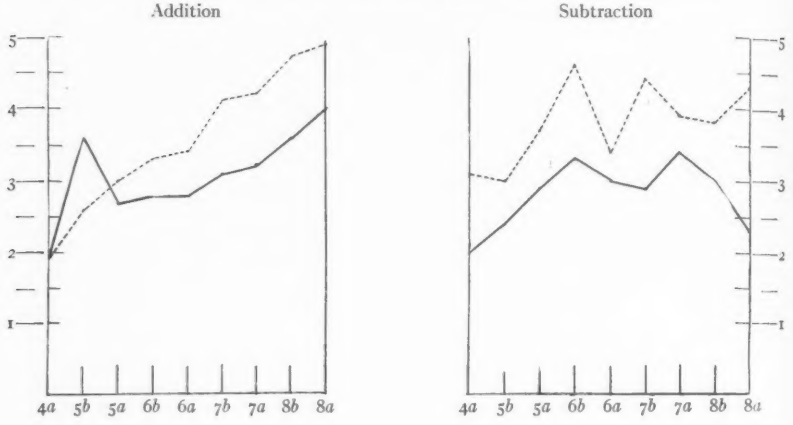
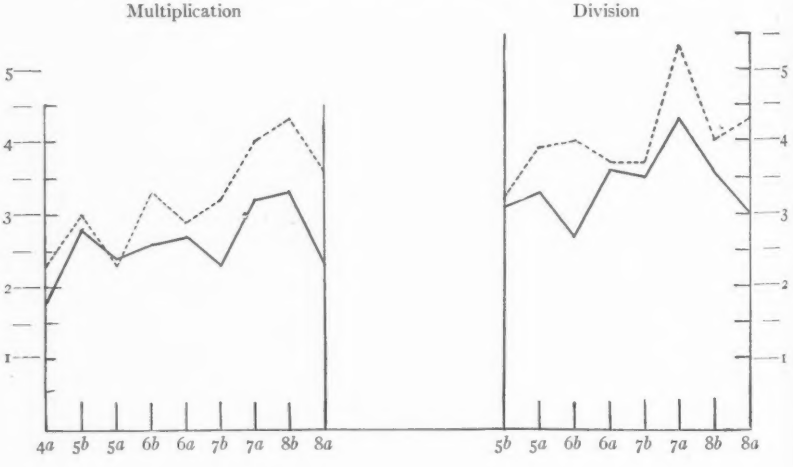


CHART IV

HOUGHTON, MICH., GROWTHS. 405 PUPILS, OCTOBER, 1913, TO JUNE, 1914



lines are the tentative standards, the lower curves are the October results, and the upper curves the June results. The graphs speak for themselves and they tell an instructive story. With very few exceptions, the standards set were attained and in some cases they were exceeded. It is interesting to note that the accuracy of subtraction and division is much greater than that of addition and multiplication. But the essential thing is that the June results were a remarkably close approximation to the tentative standards. One feels almost like stating as a proposition capable of demonstration that reasonable standards can in a very short time be attained.

A tabulation was now made of the growths from October to June, with the results shown in Table II and the accompanying

TABLE II

ADVANCE OF 405 PUPILS FROM OCTOBER, 1913, TO JUNE, 1914

GRADE	ADDITION			SUBTRACTION			MULTIPLICATION			DIVISION		
	No.	Attempts	Rights	No.	Attempts	Rights	No.	Attempts	Rights	No.	Attempts	Rights
4A.....	39	1.9	1.9	40	2.0	3.1	35	1.8	2.3	.....	.....	.....
5B.....	37	3.6	2.6	37	2.4	3.0	37	2.8	3.0	30	3.1	3.2
5A.....	46	2.7	3.0	46	2.9	3.7	46	2.4	2.3	46	3.3	3.9
6B.....	49	2.8	3.3	51	3.3	4.6	51	2.6	3.3	50	2.7	4.0
6A.....	41	2.8	3.4	41	3.0	3.4	41	2.7	2.9	41	3.6	3.7
7B.....	44	3.1	4.1	44	2.9	4.4	43	2.3	3.2	44	3.5	3.7
7A.....	65	3.2	4.2	65	3.4	3.9	66	3.2	4.0	66	4.3	5.3
8B.....	40	3.6	4.7	40	3.0	3.8	40	3.3	4.3	39	3.6	4.0
8A.....	39	4.0	4.9	40	2.3	4.3	39	2.3	3.6	40	3.0	4.3

graphs (Charts III and IV). Note that every grade showed growths in every operation and that the growth in rights exceeded the growth in attempts. Speaking roughly, the 405 pupils in a school year showed a growth of 3 examples in each of the four operations.

But there is also a dark side to the story. Table III and the corresponding graphs (Charts V and VI) show the individual growths by numbers and by percentages and display the wide variation. Thus in subtraction, 43 pupils, or 16 per cent of the group, suffered actual losses in speed and 26 pupils, or 6 per cent,

TABLE III

ADVANCE FROM OCTOBER, 1913, TO JUNE, 1914

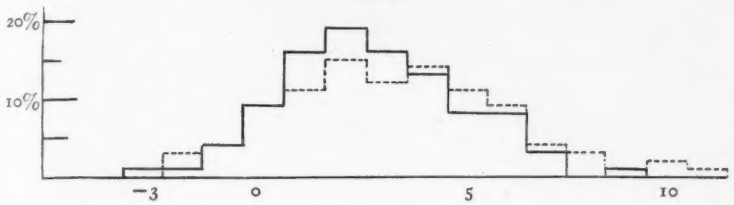
SCORE	ADDITION				SUBTRACTION				MULTIPLICATION				DIVISION			
	ATTEMPTS		RIGHTS		ATTEMPTS		RIGHTS		ATTEMPTS		RIGHTS		ATTEMPTS		RIGHTS	
	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage
13	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
12	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	3	1
11	.....	.....	4	1	1	.....	3	1	.....	.....	.....	.....	1	.....	4	1
10	.....	.....	6	2	1	.....	5	1	.....	.....	.....	.....	7	2	5	2
9	3	1	3	1	3	1	4	1	1	.....	2	.....	4	1	10	3
8	1	.....	13	3	6	2	16	4	.....	.....	8	2	6	2	20	6
7	12	3	17	4	14	4	25	6	4	1	18	5	22	6	20	6
6	30	8	34	9	10	3	27	7	13	3	33	8	25	7	22	6
5	32	8	44	11	25	6	36	9	19	5	36	9	28	8	42	11
4	50	13	56	14	59	15	63	16	45	11	47	12	44	12	44	12
3	65	16	49	12	55	14	67	17	81	20	61	15	61	17	52	14
2	76	19	62	15	85	21	62	15	90	23	77	19	51	15	42	11
1	65	16	45	11	63	16	44	11	74	19	60	15	59	17	49	13
0	35	9	37	9	35	9	23	6	42	11	40	10	23	7	30	8
−1	16	4	17	4	19	5	15	4	17	4	15	4	12	3	7	2
−2	5	1	12	3	8	2	5	1	8	2	3	1	5	1	5	2
−3	5	1	1	.....	7	2	4	1	2	.....	2	.....	3	1	2	1
−4	.....	.....	1	.....	5	2	2	.....	2	.....	.....	.....	2	1	.....	.....
−5	1	.....	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
−6	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	398		402		402		405		398		401		353		359	

CHART V

GROWTHS. 405 PUPILS, OCTOBER, 1913, TO JUNE, 1914

Full lines, attempts; dotted lines, rights

Addition



Subtraction

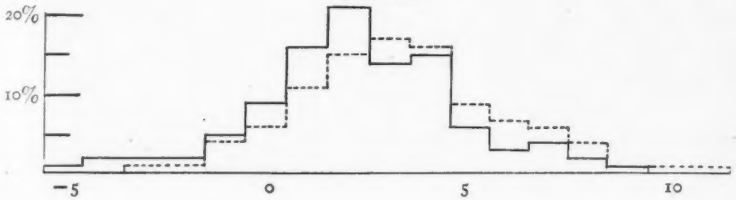
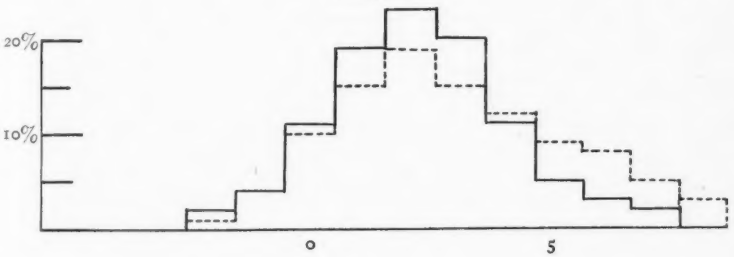
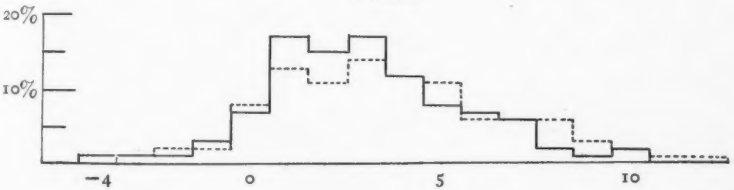


CHART VI

Multiplication



Division



suffered losses in accuracy; 35 pupils, or 9 per cent, made no change in speed and 23 pupils, or 6 per cent, no change in accuracy. From 80 to 85 per cent of the group made growths varying from one to eleven examples. There is no reason why everyone who is not mentally deficient should not grow in speed and accuracy, and the problem to be attacked during the current school year is the attainment of standard scores by every individual.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN
Librarian, School of Education, University of Chicago

Arnold, Felix. Obstructed breathing and memory. Psychol. Clinic 8:234–46. (Ja. '15.)

Baker, Franklin T. High-school reading: compulsory and voluntary. English J. 4:1–8. (Ja. '15.)

Bowden, Witt. Education for the control and enjoyment of wealth. Educa. R. 49:147–67. (Fe. '15.)

Canby, Henry Seidel. The undergraduate background. Harper 130:466–71. (Fe. '15.)

Childe, Elizabeth. Teaching concentration. Outl. 109:155–59. (20 Ja. '15.)

Claxton, P. P. The American rural school. School and Society 1:37–50. (9 Ja. '15.)

Coulter, John M. The mission of science and education. School Sci. and Math. 15:93–100. (Fe. '15.)

Cubberley, Ellwood P., and Elliott, Edward C. Rural-school administration. School and Society 1:154–61. (30 Ja. '15.)

Cushman, Lillian S. A test of efficiency for the industrial arts. Indust. Arts M. 3:49–51. (Fe. '15.)

Dabney, Charles W. The movement for the modern city university in Germany. School and Society 1:150–54. (30 Ja. '15.)

Dewey, John. The American Association of University Professors: Introductory address. Science 41:147–51. (29 Ja. '15.)

Eliot, Charles W. Educational evolution. School and Society 1:1–8. (2 Ja. '15.)

Fitz-Gerald, John D. Languages and the college-preparatory course. Educa. R. 49:168–90. (Fe. '15.)

Foster, Wilfred L. Improvement of dental hygiene in the high school, with relation to efficiency. Psychol. Clinic 8:230–33. (Ja. '15.)

Foster, William T. The state-wide campus. School and Society 1:13–16. (2 Ja. '15.)

[1] *Abbreviations.*—Cur. Opinion, Current Opinion; Educa., Education; Educa. R., Educational Review; El. School J., Elementary School Journal; English J., English Journal; Hist. Teachers M., History Teachers Magazine; Indust. Arts M., Industrial Arts Magazine; Outl., Outlook; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; School Sci. and Math., School Science and Mathematics.

Gerrish, Carolyn M. Secondary school composition. Educa. R. 49:126–35. (Fe. '15.)

Gruenberg, Benjamin C. Thought in science and in science teaching. Pop. Sci. Mo. 86:164–73. (Fe. '15.)

Hall, G. Stanley. Teaching the war. School and Society 1:8–13. (2 Ja. '15.)

Harris, James H. An inquiry into the departmental system. El. School J. 15:323–30. (Fe. '15.)

Hinckley, Alice C. Six weeks with a supposedly hopeless case. Psychol. Clinic 8:213–29. (Ja. '15.)

Johnston, W. Dawson. The library and history study. Hist. Teachers M. 6:31–33. (Fe. '15.)

Johnston, W. Dawson. The library and the teaching of English. English J. 4:21–27. (Ja. '15.)

Lovejoy, Owen R. Education and industry debating over children. Survey 33:399–400. (9 Ja. '15.)

Manuel, Herschel T. The use of an objective scale for grading handwriting. El. School J. 15:259–78. (Ja. '15.)

Oberholtzer, E. E. Testing the efficiency in reading in the grades. El. School J. 15:313–22. (Fe. '15.)

(A) physiological discovery that explains the formation of bad habits. Cur. Opinion 58:101–2. (Fe. '15.)

Prosser, C. A. The Richmond survey of the National Society for the Promotion of Industrial Education. School and Society 1:161–64. (30 Ja. '15.)

Royce, Josiah. The Carnegie Foundation for the Advancement of Teaching and the case of Middlebury College. School and Society 1:145–50. (30 Ja. '15.)

Sachs, Julius. The secondary school teacher and the college. School and Society 1:50–53. (9 Ja. '15.)

Sears, J. B. The problem of the rural school. Pop. Sci. Mo. 86:174–79. (Fe. '15.)

Thorndike, Edward L. The disciplinary value of studies: a census of opinions. Educa. 35:278–86. (Ja. '15.)

Waldo, Karl Douglas. Tests in reading in Sycamore schools. El. School J. 15:251–68. (Ja. '15.)

Wilgus, James A. The teaching of history in the elementary school. Educa. R. 49:136–46. (Fe. '15.)

Woodbridge, Frederick J. E. The university and the public. Educa. R. 49:109–25. (Fe. '15.)

NORMAL COLLEGE OF THE
North American Gymnastic Union
(Accredited in Classes A, B, and C)

Oldest American Institution for the training of teachers of physical education, founded 1861. Two- and four-year courses for high-school graduates leading to academic degree. Thirty-five graduates this year (17 men). Physical Training Teachers' Bureau in connection; last year's graduates all placed. Summer session June 28 to July 24. Write for illustrated catalogue and summer session bulletin.

405 East Michigan Street - - - Indianapolis, Ind.

THE UNIVERSITY OF VERMONT
SUMMER SCHOOL
The Coolest Summer School East of the Rockies
A SPECIAL SCHOOL FOR TEACHERS
Burlington on Lake Champlain, July 5 to August 13

For information address
J. F. MESSENGER, Director

CORNELL UNIVERSITY
Summer Session July 6–August 13

Instruction for teachers in all high-school subjects, including Oral English and Spanish.

Music, Manual Training, Nature Study, and Gardening, for high school and grades. Many courses in Physics, Chemistry, and the Biologic Sciences, including their applications in Agriculture and Home Economics. Cornell affords a very unusual combination of university equipment and rare opportunities for out-of-door work in garden and field, forest and stream.

For announcement write
Registrar of the University, Ithaca, N.Y.

The University of Montana Summer School
Missoula, Montana *In the Heart of the Rockies*

Intellectual Inspiration and Physical Comfort

THE location of the University of Montana is in the midst of the finest mountain scenery in the world. The climate is ideal and the work of the summer student is a delight in these surroundings.

Eminent specialists are on the teaching staff and the entire equipment of the University of Montana is available.

COURSES

The summer school is intended for teachers who wish to improve their professional equipment, to do residence work for credits toward degrees, to increase their knowledge, and to renew their enthusiasm.

Teachers, principals, and superintendents will find special courses suited to their needs.

Unparalleled opportunity for work in biology is afforded at the Montana Biological Station on Flathead Lake.

For details, address

DIRECTOR OF SUMMER SCHOOL
UNIVERSITY OF MONTANA
Missoula, Montana

UNIVERSITY OF WASHINGTON
Summer Session, June 21 to July 30, 1915

Puget Sound Region ideal for summer study and recreation. Temperature seldom exceeds 80 degrees. University campus of 355 acres borders on Lake Washington and Lake Union, is close to Puget Sound, in sight of stately Mt. Rainier, and in full view of the white-capped Olympics across the Sound and the Cascades to the eastward. Boating, swimming, fishing, mountaineering.

Enrolment last summer 916; about one-fourth graduate students. Total University enrolment this year 4,050.

Courses: about 160 by over 90 instructors. Regular work in the College of Liberal Arts, the College of Science, the College of Education, the Graduate School, and the Puget Sound Marine Station.

Exceptional Facilities for Manual Training, Drawing, Vocal and Instrumental Music, Child Welfare, Study of Defectives, Playgrounds and Athletics, Languages, Literature, History, Political and Social Science, Philosophy, Journalism, Mathematics, Advanced Courses in Education, Home Economics, Botany, Chemistry, Physics, Geology, Marine Zoölogy.

Teachers' Appointment Committee. A good time for teachers to meet superintendents.

Frederick E. Bolton, Director, Seattle, Wash.

UNIVERSITY OF PENNSYLVANIA
SUMMER SCHOOL
TERM: JULY 6 TO AUGUST 13

A variety of courses in the following subjects leading to undergraduate and graduate degrees: Anthropology, Chemistry, Drawing, Economics, Education, English, Finance and Commerce, French, German, Greek, History, Italian, Latin, Mathematics, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Sociology, Spanish and Zoölogy.

Systematic group of courses for Elementary-School Teachers centered about the School of Observation. Model High-School Classes in English, German and Mathematics, supplemented by courses on Methods of Teaching High-School Subjects.

Practical, Systematic and Advanced Courses in Psychology for Social Workers, Teachers of Backward Children, Superintendents, General Supervisors, etc. Psychological Clinic and Restoration Class.

All courses open to men and women. Comfortable accommodations in the University Dormitories. Library, Houston Hall, Gymnasium, and Swimming-Pool open to all students.

For circular and information, address

J. P. Wickersham Crawford, Director of the Summer School, **Box 3, College Hall, University of Pennsylvania, Philadelphia, Pa.**

IMPORTANT EDUCATIONAL BOOKS

The Unfolding of Personality as the Chief Aim in Education
By H. THISELTON MARK
224 pp., 12mo, cloth; $1.00, postage extra (weight 14 oz.)

The School and Society
By JOHN DEWEY. Supplemented by a statement concerning the work of the University Elementary School
130 pp., 12mo, cloth; $1.00, postage extra (weight 14 oz.)

Literature in the Elementary School
By PORTER LANDER MACCLINTOCK
x+306 pp., 12mo, cloth; $100, postage extra (weight 1 lb. 8 oz.)

Ethics in the School
By ELLA FLAGG YOUNG
44 pp., 12mo, paper; net, 25 cents; postpaid, 27 cents

Isolation in the School
By ELLA FLAGG YOUNG
112 pp., 12mo, paper; net, 50 cents; postpaid, 54 cents

The Place of Industries in Elementary Education
By KATHARINE ELIZABETH DOPP. With frontispiece.
viii+270 pp., 12mo, cloth; $1.00, postage extra (weight 1 lb. 6 oz.)

The Psychology of Child Development
By IRVING KING
xxii+266 pp., 12mo, cloth; $1.00, postage extra (weight 1 lb. 6 oz.)

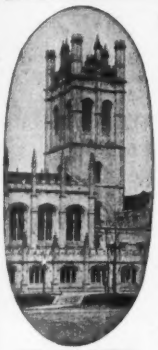
The Elementary Course in English
By JAMES FLEMING HOSIC
x+150 pp., 16mo, cloth; 75 cents, postage extra (weight 14 oz.)

A Critical Study of Current Theories of Moral Education
By JOSEPH KINMONT HART
vi+48 pp., royal 8vo, paper; net, 50 cents; postpaid, 54 cents

Some Types of Modern Educational Theory
By ELLA FLAGG YOUNG
70 pp., 12mo, paper; net, 25 cents; postpaid, 28 cents

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO - - - - - - - - ILLINOIS

The University of Chicago



MITCHELL TOWER

Offers instruction during the Summer Quarter on the same basis as during the other quarters of the academic year.

The undergraduate colleges, the graduate schools, and the professional schools provide courses in ***Arts, Literature, Science, Commerce and Administration, Law, Medicine, Education, and Divinity.*** Instruction is given by regular members of the University staff which is augmented in the summer by appointment of professors and instructors from other institutions.

SUMMER QUARTER, 1915
1st Term, June 21—July 28
2d Term, July 29—September 3

Detailed Announcements will be sent upon Application

The University of Chicago, Chicago, Ill.

THE SCHOOL REVIEW

Edited by the Department of Philosophy and Education of the University of Chicago. Published monthly, except in July and August. Subscription price, $1.50 a year; single copies, 20 cents; foreign postage, 52 cents

The University of Chicago Press
CHICAGO ILLINOIS

In Helping the Child Find Suitable Life Work

Seek the Best Authority on the Subject

No one in the United States can give more helpful advice, more intimate information concerning the occupational needs of boys and girls, and more practical means of helping them than J. Adams Puffer. His book

VOCATIONAL GUIDANCE

Adopted for State Teachers Reading Circles in Arkansas, Wyoming, Oregon, New Mexico, etc.

is the essence of common-sense counsel and direction in the cause of the child. Here the teacher will learn how to become a vocational guide, how to determine the chances of a child's success in a given employment, what are the most promising pursuits open to him, and what abilities are called for in various occupations. Every teacher should have it.

Illustrated with half-tones from photographs
Cloth $1.25

Rand McNally & Company
Chicago New York

CLEANLINESS OF OPERATION

is one of the strong features that has helped to earn the present world-wide reputation and endorsement of the

Daus' Improved Tip Top Duplicator

No printer's ink used, thus avoiding soiled hands and clothing. No expensive supplies. Always ready for use.

100 Copies from Pen-written and 50 Copies from Typewritten Original

SENT ON 10 DAYS' TRIAL WITHOUT DEPOSIT

Complete Duplicator, cap size (prints 8½x13 inches), contains a continuous roll of our new **"Dausco" Oiled Parchment Back** duplicating surface (which can be used over and over again), two bottles of ink, rubber, and powder. Price, $7.50, less special discount of 33⅓ per cent, net **$5.00**

Take advantage of our trial offer

Circular of larger sizes upon request

FELIX E. DAUS DUPLICATOR CO. Daus Bldg., 111 John St., NEW YORK

THE UNIVERSITY OF CHICAGO PRESS

Educational and Scientific works *printed* in English, German, French, and all other modern languages. *Estimates furnished.*

58TH STREET AND ELLIS AVENUE, CHICAGO, ILLINOIS

GOODE'S BASE MAPS

a series of outline maps for all classes of work in applied sciences and the various fields of research

Prepared by

J. PAUL GOODE

Associate Professor of Geography in the University of Chicago

This series is designed to meet the needs of teachers and students in a wide variety of work with maps. The maps are adapted to the use of classes of every grade, from the university to the common school: in geography, including commercial or economic geography, in physiography, geology, botany, zoölogy, anthropology and ethnology, sociology, economics, politics, and history.

The maps have been prepared by being first drawn on a large scale, to insure accuracy of detail, and then greatly reduced in the engraving. In the quality of the drawing they are superior to most maps used in books and magazines.

In two Sizes

8 x 10½ in., 1 cent each
15 x 10½ in., 3 cents each

No. 1. The World: on Mercator's projection.
No. 2. North America: on an equal-area projection.
No. 3. South America: Sanson's projection.
No. 4. Europe: conic projection.
No. 5. Asia: Lambert's equal area.
No. 6. Africa: Sanson's projection.
No. 7. Australasia: Mercator's projection.
No. 9. America (U.S.): conic projection.*
No. 10. America (U.S.): state outlines only; conic projection.
No. 14. The British Isles: conic projection.
No. 16. Europe, Western and Southern: conic projection.
No. 17. France: conic projection.
No. 18. The Spanish Peninsula: conic projection.
No. 19. Italy: conic projection.
No. 20. Central Europe: conic projection.*
No. 21. The German Empire: conic projection.
No. 24. The Levant: conic projection.*

*Double size not yet ready.

No. 32. America (U.S.): by counties, polyconic projection.

15×10½ inches, No. 32A, 3 cents each.
21×15 inches, No. 32B, 5 cents each.

(Others to be issued later)

When ordering the small or standard size, reference to the map desired should be by the appropriate number in the above list. When the double-size map is desired, the symbol "A" should follow the number. Thus, No. 4 means the 8×10½-inch map of Europe; No. 4A means the 15×10½-inch map of Europe.

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS